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CALIFORNIA JOURNAL OF ELEMENTARY EDUCATION

MAY
1941

CALIFORNIA JOURNAL OF ELEMENTARY EDUCATION

VOLUME IX MAY, 1941 NUMBER 4

The California Journal of Elementary Education is published quarterly in August, November, February, and May by the California State Department of Education. It is distributed without charge to school officials primarily concerned with the administration and supervision of elementary education and to institutions engaged in the training of teachers for the elementary schools. To others the subscription price is $1.00 a year; the price for single copies is 30 cents. Subscriptions should be sent to the Division of Textbooks and Publications.

Entered as second-class matter September 13, 1932, at the Post Office at Sacramento, California, under the Act of August 24, 1912.

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EQUAL ADDITIONS METHOD OF SUBTRACTION

During the few months in which the new state series arithmetic textbooks have been in use, the State Department of Education has received a number of communications from teachers and principals occasioned by difference between the new and former series in the method of teaching subtraction. The new series, the *Child-Life Arithmetics,* presents only the equal additions method, whereas the former series taught both this and the decomposition method, but the majority of teachers probably taught the decomposition method. The communications seek information on the relative merits of the two methods and request recommendations from the Department of Education on the two following points:

1. Should the method presented in the new state series textbooks, the equal additions method, be used uniformly in teaching subtraction in the elementary schools throughout the state, or should teachers follow their personal preferences in the choice of methods?
2. What method of subtraction should be taught to pupils who began the study of subtraction by the decomposition method while using the former state textbooks, but who have not yet mastered the process?

The decision of the authors of the *Child-Life Arithmetics* to use the equal additions method of subtraction in their books was based on their careful study of the research dealing with the relative merits of the various methods of subtraction. Until recently, no research on the subject had yielded sufficiently conclusive results to justify a claim of marked superiority for any particular method. In 1930 Ruch and Mead, in summarizing the research comparing the merits of various methods, stated that "the differences among the rival methods of subtraction must be small."[1] No really conclusive study has been made since, until that of Johnson in 1938, on *The Relative Merits of Three Methods of Subtraction,* which appears definitely to establish the superiority of the equal additions method.[2]

Following are excerpts from the conclusions of Johnson's study.

> . . . Other things being equal, the decomposition technique in subtraction of whole numbers is, by its own intrinsic nature, by far the poorest method to employ from the standpoint of both accuracy and time.

[1] G. M. Ruch and Cyrus D. Mead, "A Review of Experiments in Subtraction," *Report of the Society's Committee on Arithmetic.* Twenty-ninth Yearbook of the National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Co., 1930, p. 678.

[2] John Theodore Johnson, *The Relative Merits of Three Methods of Subtraction.* Contributions to Education, No. 738. New York: Bureau of Publications, Teachers College, Columbia University, 1938. Used by permission of the publisher.

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When compared with the equal additions method, the decomposition method produces 18 per cent more errors and requires 15 per cent more time.

. . . .

When numbers of errors were constant, so that comparison could be made with respect to time only, the group using the decomposition method required 47 per cent more time than did the combined group using the equal additions and Austrian methods.

Furthermore, the statistical significance of all of the above differences (except the one mentioned between equal additions and Austrian in accuracy), is such that should the experiment be repeated with different population samplings we could be practically certain that the results would be in the same direction, favoring the equal additions and Austrian methods over the decomposition method both in accuracy and in time.

. . . .

. . . in an example like the one at the left, the decomposition method requires an additional skill not required by the equal additions $\begin{array}{r}4000\\2795\end{array}$ method or the Austrian method, that of borrowing when there are two or more successive zeros in the minuend. This skill, as every teacher of arithmetic knows, must be specifically taught under the decomposition method. That is, a pupil may be able to do an example like $\begin{array}{r}812\\687\end{array}$ and not be able to proceed in an example like $\begin{array}{r}900\\687\end{array}$. He may be able to take the first step, 7 from 10, but he will almost certainly flounder on the second step. On the other hand, the pupil who uses either the equal additions method or the Austrian method sees no new skill in the second example above; in this example he merely thinks of each 0 as suggesting a 10.

. . . .

. . . From the first comparison, . . . it is evident that either the Austrian method or the equal additions method requires less concentration and strain than the decomposition method since the mind is relieved from having its attention divided between a subtraction and a memory of something to be done to the next figure of the minuend. The second comparison, . . . shows an actual saving of time in favor of the Austrian and equal additions methods since these methods avoid the necessity of teaching a major skill which is peculiar to the decomposition method, namely the skill of changing 4000 to 3000 + 900 + 90 + 10 when 4000 is the minuend in an example like 4000–2795. . . .

. . . As a matter of fact, however, the pupil in the third grade, where subtraction is generally taught, does not, in the majority of cases, understand the rationalization that is given in connection with the teaching of subtraction. It may be beyond his capacity, or the difficulty may be in the way it is taught. At any rate, in most cases he learns the skill mechanically and performs it automatically. Without going into the psychological controversy of whether a pupil should be conscious of the reasons why he is doing what he is doing when he subtracts or whether he should merely do it as an automatic habit, if one method is found more efficient in use than another method, although the second method permits of more ease in rationalization, it is a question whether efficiency in later performance should be sacrificed for the sake of an initial stage of more facile explanation. Furthermore, one explains a process a few times only, whereas one computes many hundreds of times in a lifetime. This question of rationalization has been a cause of argument for many years among teachers of the two methods,

decomposition and equal additions. Advocates of the decomposition method hold that their method is more easily explained, while advocates of the equal additions plan point out that experimental evidence of greater efficiency is all on their side. There has been no scientific proof that the decomposition method is more easily explained. This judgment is merely the opinion of teachers who have been taught that method and hence naturally understand that method better and consequently can explain it better. In all probability the equal additions method can be explained equally well, but most teachers have not yet learned how best to explain it.

. . . .

As there is no scientific evidence in regard to which of the two methods, the decomposition or the equal additions, can most easily be rationalized, for young pupils, let it be granted for the sake of the argument that the decomposition method can be more easily rationalized than the equal additions method. The question then resolves itself into this: Shall a method that has been proved to be least efficient after it is learned continue to be taught just because it is more easily explained upon first presentation? Let the reader be the judge.

. . . .

. . . The decomposition method, in view of the evidence now at hand, makes a poor showing, being inferior in both speed and accuracy to either of the other methods.[1]

In making a recommendation on the first of the foregoing items, it should first be noted that the new state series arithmetic textbooks present the method of subtraction that research has demonstrated to be the best method. Furthermore, it appears desirable for the same method to be taught throughout the state in order to avoid the confusion that would otherwise result in the case of pupils who transfer from one school to another while learning the process of subtraction. The State Department of Education therefore recommends that the equal additions method of subtraction, as presented in the new state series textbooks, be taught in all elementary schools in the state to pupils who are beginning the study of subtraction.

The second of the foregoing items on which recommendations are requested reflects the desire of teachers to avoid confusing pupils by teaching two methods for performing the same process. There are some pupils who began the study of subtraction by the decomposition method in using the former state series textbooks and who are now using or will begin next semester to use the new textbooks without having mastered the process of subtraction. In general, it can be stated that the extent to which such pupils have mastered the process should determine whether they should continue with the decomposition method or learn the equal additions method. In this connection the following suggestions are offered:

1. Pupils who have mastered or nearly mastered subtraction by the decomposition method should continue to use this method.
2. Pupils who began the study of subtraction by the decomposition method, but who have as yet acquired little or no understanding of the process, should be taught by the equal additions method.

[1] John Theodore Johnson, *op cit.*, pp. 66-71.

3. The method to be used by pupils who have not yet mastered subtraction but who are somewhat beyond the initial stages must be determined by the extent of their understanding of the process. If their understanding of the decomposition method is fairly well developed and if they have attained a fair degree of skill in its use, they should continue to use this method. If, however, their understanding and skill have not reached what can be considered the stage of initial learning, they should probably be taught the equal additions method.

POLL ON YOUTH AND EDUCATION

A recent issue of the National Education Association Research Bulletin presents the results of a poll of public opinion carried on by the American Youth Commission under a subvention from the General Education Board.[1] A total of 3819 persons were interviewed, representing an accurate cross-section of the adult population of the country.

The following summary of responses indicates the beliefs and the attitudes of the group on some of the questions asked:

Questions Asked	*Per Cent Responding*		
	Yes	*No*	*No Opinion*
Is education overemphasized today?	21	73	6
Has education improved?	85	7	8
Should youth discuss controversial issues?	72	18	10
Should teachers discuss controversial issues in high school?	67	23	10
Do teachers favor the wealthy?	47	40	13
Should school children have physical examinations at public expense?	86	10	4
Is too much money spent for schools?	14	66	20
Are certain states so poor they cannot afford good schools	50	27	23
Should poor families be helped to educate their children?	72	21*	4
Should per pupil expenditures for negro and white children be equal	78	16	6
Would many high school students be better off at work?	54	39	7
Should the NYA be continued as a regular part of government?	82	10	8
Should the government provide a work-training program for unemployed youth?	82	11	7

* 12 per cent qualify their answers.

All persons engaged in public education should thoroughly familiarize themselves with the bulletin from which these data are summarized. In a period when all articles on education carried by certain widely circulated

[1] *What People Think About Youth and Education.* National Education Research Bulletin, Vol. XVII, No. 5, November, 1940. Washington: National Education Association of the United States.

magazines direct unfavorable criticism toward the schools, it is reassuring to find that a careful poll of public opinion reveals a favorable attitude.

Long ago John Dewey said, "what the best and wisest parent wants for his own child, that must the community want for all its children. Any other ideal for our schools is narrow and unlovely; acted upon it destroys our democracy." It augurs well for the democratic way of life to find such well-developed social concern expressed by a gratifying majority of the American people as was shown by this large and representative sampling.

HELEN HEFFERNAN

SANTA BARBARA COUNTY CURRICULUM GUIDES

The first two volumes of a five-volume series of curriculum guides to be issued by the Santa Barbara County Board of Education have just been published and are now available.[1]

According to a statement in the Foreword of Volume I, "these volumes have grown out of a five-year program of systematic review of the educational needs of the county with the view of developing a more adequate educational service. The study involved the participation of teachers, supervisors, administrators, and parents, and a group of consultants from the faculty of the School of Education of Stanford University."

The first volume reports eight units of study developed co-operatively by teachers and pupils in Santa Barbara County Schools during the progress of the curriculum development program in harmony with the general design of the educational program and policies agreed upon by the staff of the schools of the county. Representing, as they do, the actual classroom experiences of pupils under the guidance of teachers who actively participated in the curriculum program by building basic philosophical purposes, curriculum content, sequence of learning experiences, instructional materials, and pupil growth habits, these units will be of particular interest to teachers and educators engaged in basic curriculum study.

The second volume is the general teacher's guide. It contains a statement of basic philosophical principles underlying the county program, a scope and sequence of learning experiences, suggested problems, activities, and instructional materials for primary, intermediate, and upper-grade levels as well as specific teaching guides to developing units, integrating tool subjects, teaching aids, excursions, the evaluation of the total program, public relations, and the ethics of the teaching profession.

Three volumes of the series are to follow: *The Program for Curriculum Development; Curriculum Guide for Secondary Teachers; Teachers' Guide for Use of Community Resources.*

[1] *Santa Barbara County Units of Study for Teachers in Elementary Schools.* I. Santa Barbara: The Schauer Printing Studio, Inc., 1941. Pp. iii + 426.

Santa Barbara County Curriculum Guide for Teachers in Elementary Schools. II. Santa Barbara: The Schauer Printing Studio, Inc., 1941. Pp. xii + 553.

YEARBOOK ON FAMILY LIFE

The function of education in family life is fully explored in the nineteenth yearbook of the American Association of School Administrators now available from the National Education Association.[1] The yearbook, *Education for Family Life,* is a contribution of the Committee on Education for Family Life appointed in 1938 by President John A. Sexson of the American Association of School Administrators in recognition of the fact that education has an increasing obligation to the maintenance and improvement of family life in American democracy. The book may well be considered a guide to planning the program in education for family life, so fully does it deal with the topic.

The book presents a straightforward and common-sense discussion of recent societal changes which have profoundly affected family life, and which call for a reinterpretation of the function, not necessarily the purpose, of the public schools.

Treated in the ten chapters are such basic issues as (a) the worth and place of the family today in terms of individual and societal needs, (b) the changing times and the consequent need for family adjustments with the difficulties which arise therefrom, (c) the increasing need for specific education to assist the family in meeting the increasingly complex problems and difficulties confronting it.

Two chapters offer concrete suggestions for an educational program to meet family life needs. It is significant to note that the treatment offered here for improved education for family life is based upon the premise that the problem is to be considered in its broadest sense—that family life becomes a major objective at every point in the curriculum.

The concluding chapter contains a rather extensive Checklist for Programs of Education for Family Life. The Appendix includes three important sections which also will be found indispensable to study groups:

A. Organizations with Materials and Services of Use in Education for Family Life
B. References on Education for Family Life
C. Fiction and Nonfiction References

RADIO PAMPHLET FOR SCHOOLS

A pamphlet for teachers, *How the Schools Can Use Radio,* Volume II, revised edition, offers helpful information regarding types of educational radio programs available to schools. There is also a discussion of such topics as the place of radio in modern education; radio a new teaching technique; how radio fits into the curriculum, and several sections on the value and use of classroom listening programs. The pamphlet is distributed free by the National Broadcasting Company, New York City, New York.

[1] *Education for Family Life.* Nineteenth Yearbook of the American Association of School Administrators. Washington: National Education Association, 1941.

CURRICULUM MATERIALS DEVELOPED IN CALIFORNIA PUBLIC SCHOOL SYSTEMS

A wealth of valuable curriculum materials have been developed through the efforts of teachers and curriculum directors in the city and county school systems of the state. These materials may be used either as suggestions for similar work or as the basis for adaptations of similar material to local situations. A list of units of work and curriculum bulletins is given here. Copies of the various items described in the list which follows are available from the office of the county or city school system in which they were develped.

Los Angeles Reading Bulletin. A new type of curriculum bulletin has recently been published by the Los Angeles City Schools. "The Improvement of Reading in Secondary Schools," School Publication No. 358, presents in 53 pages the basic guidance essential for the improvement of instruction not only in the secondary school but in the middle and upper grades of the elementary school as well.

Major considerations concerning the diagnosis of reading difficulties through the use of recommended intelligence and reading tests, and interest inventories are clearly and definitely stated. The bulletin deals realistically with the classroom situation in recognizing the fact that busy teachers can not make extensive clinical case histories but must use instruments which yield a maximum of pertinent information with a minimum of record keeping.

The bulletin summarizes the causes of reading deficiency: the factor of mental health, articulation between various school levels, special classes, and methods of instruction. Of especial interest are the sections devoted to the selection of materials, and the recommended lists of materials for use in guidance, in the development of reading skills, and social studies.

The members of the curriculum committee, Mrs. Gertrude Addison, Assistant Supervisor, and William B. Brown, Director of Curriculum, under whose direction the publication was prepared, are to be congratulated on their successful approach to the problem.

Unit on Democracy. "Our American Government and Democracy" is a unit of work for grades seven and eight prepared for the schools of Yolo County by a group of teachers. It is the belief of the group who prepared the unit that the children should be aware of the true meaning of democracy and the contribution of those who made democracy possible, and should have a deep sense of their privileges, opportunities, and responsibilities as citizens. This view of the authors is apparent throughout the manuscript.

The words and music for several songs which have been composed by the children of the various schools are included, as well as references and a bibliography.

Style Book From Ventura County. "Elementary School Newspapers" is the title of a mimeographed bulletin compiled by Theodora Mahon, Helen

Hardon, Mary Walker, and Irene Scott under the direction of Persis Hamilton, Director of Rural Education of Ventura County. This bulletin was compiled to give assistance to administrators and teachers in the preparation of newspapers in elementary schools. Classroom work in the study of newspapers, in the improvement of style in writing, in actual organization of the newspaper staff, and in the mechanics of publication are considered in detail in this excellent publication.

Farming Unit. "Farming Through the Ages, A Unit of Work for Grades 5-6" has been prepared by a committee of teachers representing the city and rural schools, under the direction of Eleanor Freeman Collins, Director of Curriculum in San Mateo County. The material covers the ground interestingly from the time of man's most primitive efforts at growing food to the most modern and efficient procedures of the present day, under varying geographical conditions. A full bibliography is appended.

INFORMATION EXCHANGE CATALOGUE

The Information Exchange on Education and National Defense, which has recently been organized in the United States Office of Education as a clearinghouse for ideas and materials on education and national defense, announces its first catalogue. It lists 103 items which have been organized into 24 loan packets. By discovering and using new ideas, democracy uses its resources of ingenuity. Loan packets listed are made up of materials contributed by schools and colleges, organizations and other interested individuals and groups. They come from institutions as widely separated as Seattle, Washington, and Columbia, South Carolina.

Each loan packet contains a number of different materials related to a particular topic: The role of the schools in the national emergency; understanding and practicing democracy; improving school and community; conserving the nation's natural resources; building and preserving good health; understanding the world about us; vocational education and national defense; libraries and national defense.

Some packets contain materials entirely within one field, such as elementary or secondary. Others contain materials of more general interest and value in two or more fields.

Materials may be borrowed for a period of two weeks from the time they are received. Franked envelopes or franked labels are provided for the return of the materials without payment of postage. When materials are returned, others may be requested.

A copy of the catalogue listing these materials may be secured by writing to Information Exchange on Education and National Defense, United States Office of Education, Federal Security Agency, Washington, D. C.

DEMOCRACY IN SUPERVISION [1]

GLADYS L. POTTER, *Supervisor of Kindergarten and Primary Education, Long Beach Public Schools*

In 1903 John Dewey wrote an article in the *Elementary School Teacher* in which he said ". . . if there is a single public school system in the United States where there is an official and constitutional provision made for submitting questions of methods of discipline and teaching, and the questions of the curriculum, textbooks, etc., to the discussion and decision of those actually engaged in the work of teaching, that fact has escaped my notice. . . ." [2]

In 1937 in an address before the Department of Superintendence of the National Education Association at New Orleans [3] he indicated that that statement was no longer true. Many school systems had made noticeable advances in the direction of democracy. He added, however, that there was still great need for extension of these practices in educational administration and supervision and the problem of authoritarian versus democratic methods still needed serious consideration.

It is encouraging to note that in thirty-five years schools have made some progress in the use of democratic methods with their teaching staffs. Thirty-five years represents the life time service of a teacher. How slowly we have been able to translate theory and philosophy into practice. School systems have long advocated democratic methods but the iron hand of authority can still be felt in too many situations.

In his address before the superintendents in 1937 Dewey made another interesting and revealing commentary. He stated that it was his impression that much more progress had been made by teachers in democratic treatment of children than by administrators and supervisors in the democratic treatment of their teaching staffs.[4] How is it that teachers in dealing with children have moved faster in the desired direction of democracy? Is it because teachers have had more faith in children than supervisors have had in teachers? The basic foundation of democracy is faith in the capacity of human nature–faith in human worth and intelligence and in the power of co-operative effort.

Why have those engaged in supervisory activities lacked faith and so failed to be democratic? I wonder if it is not because we have felt that through a process of sifting those best prepared to carry the load are in positions of

[1] An address given at the Conference of Elementary School Principals and District Superintendents, San Francisco, April 7, 1941.

[2] John Dewey, "Democracy in Education" (from *Elementary School Teacher*, December, 1903), *Education Today*. New York: G. P. Putnam's Sons, 1940, p. 64.

[3] John Dewey, "Democracy and Educational Administration" (from *School and Society*, April 3, 1937), *Education Today*. New York: G. P. Putnam's Sons, 1940, p. 343.

[4] *Ibid.*

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responsibility. We have thought that teachers were not wise enough to make policies, to carry responsibilities, to make decisions that affect the lives of children entrusted to our care. Every autocrat has used this argument as an alibi to justify his assumption of power. Teachers may not be very wise but "there is one thing they are wiser about than anybody else can be, and that is where the shoe pinches, the troubles they suffer from." [1] Each has needs of his own as significant to him as those of others are to them and he should be given an opportunity to discuss these needs as they affect his work and working conditions. If supervisory practice seems to indicate that we believe teachers are not wise enough to participate in determining the policies and aims of their own work how can we believe that they are wise enough to employ effectively methods that are dictated by another? It is probably true that custom has dictated our practices rather than any wish to be autocratic, but the results have been the same.

The watch word of classroom practice in the modern school has been learning by doing. We know that children grow in ability as they meet situations that afford an opportunity to participate, to share, to experiment, to make mistakes, and to evaluate. Unless a supervisory program is one in which there are many and varied situations in which teachers can learn to do by doing we will have them following directions without any creativity or release of intelligence, just as we had children blindly following directions in typical formal classrooms of yesterday.

In addition to the fear that teachers are not wise enough to participate in policy making I believe there has been another stumbling block in our realization of democratic practice. Those of us who are engaged in supervisory work, and I refer to supervisors and principals alike, are desirous of showy results. We want to be thought efficient. We have our sights on the finished product just as surely as the teacher in the formal school had her sights on the finished piece of work which she could exhibit. The individual and his growth is lost sight of in our zest for a product. Is it not time that we stopped being efficient long enough to scrutinize the means we are using? It is impossible that work should not be better done when teachers have that understanding that comes from having shared in the planning, the means, and the evaluation of work in process, than it was when directions were followed. The finished product will not be as showy today but the growth of the individual as he produces the product should be our concern if we are to arrive at a desirable goal.

The teacher in the classroom is familiar with the child who is dependent, lacks initiative and who expresses this status by saying "What shall I do now?" The supervisor is equally familiar with the teacher who says "Tell me what you want me to do and I shall be glad to co-operate."

Just as surely as the child's question is indicative of his previous experience, the teacher's statement reflects the experiences of that teacher with

[1] *Ibid.*, p. 339.

supervisory practice. Plato once said, "A slave is one who gets his purposes from somebody else." Have we made slaves of teachers? Has the absence of participation produced lack of interest and concern on the part of those who have been shut out? Have teachers because of their experience come to the conclusion that it is easier to just get by, to do what one is told to do or what they believe is expected, and do it well enough so that they will escape unfavorable notice?

Perhaps I have painted a dark picture or perhaps I have dwelt on the black spots that exist in a bright picture, but I believe it behooves us to try to analyze our own supervisory procedures in the light of truly democratic methods so that the next thirty-five years may yield greater progress than we have made in the past.

What does democracy in supervision involve?

Faith in the Capacity of Human Nature

We have said that faith in the individual was basic in the foundations of democracy. Every teacher employed in a school system has a contribution to make. He has ideas, he has abilities, he has creativity, he has capacities, he has more than average intelligence. Our declaration of faith in teachers must be shown by the hospitable climate evidenced in all of our contacts with them. Our attitudes and our practices must be such that we make teachers feel our faith in them, our appreciation of their capabilities, and our respect for their personalities. The least worthy contribution must be received in the same hospitable way as the most worthy.

If a supervisory program does not make teachers feel that we believe in them, that we welcome originality, inventiveness, and a continuous expression of individuality, how can we hope that the teaching profession will attract able persons? Why should a self-respecting person seek entrance to a profession where he feels that there is little faith expressed in his ability as an individual to do a creative job? If teachers are absorbed with the details of external conformity they will have little chance for the free and full play of their own abilities. If we can attract persons of intelligence, of force of character, of sympathy with children and consequently interested in problems of teaching through our evidences of faith in those who are in the profession, no one need be troubled about educational reforms or the solution of educational problems. But if we discourage those of independent intelligence, initiative, and of inventive ability or tend to hamper them in their work because of undemocratic methods so long will we postpone the fruition of "the good life" which we want for all children.

Faith in human nature should extend also to those persons in the community who are interested in the education of children. There are many persons in the community who have much to contribute to the policies and practices of education. If we believe in the power of co-operative effort we

will recognize the fact that we have deprived the program of many valuable contributions by excluding the mothers and fathers of the children in our schools. Exclusion is in itself a form of suppression. With participation comes interest and understanding. The faith of the schools in human nature should be evidenced by including all persons in the community who have concern for an improved society. Patrons should not always be invited to the school to be told about something that has been initiated but invited to share in the plans that come before initiation. Participation insures interest and support in a program far greater than that attained by the use of super-salesmanship.

✓ 3 In a school system there are frequently many teachers as well or better trained than the principals and supervisors. We do not always require continuous in-service training for principals and supervisors and administrators, but teachers are urged and frequently required to attend summer schools and keep abreast of the best practices. Many of our teachers are constantly ✓ in touch with the latest research, with improved materials and methods and their advice and judgment will be of immeasurable value in the solution of problems.

If our faith in teachers is not expressed both in the words we speak and in the methods we employ we will lose the benefits inherent in the teaching staff. Successful teachers should have an opportunity to transmit to other teachers the benefit of their experiences. It is a great waste if the results of successful teaching are not given a chance to penetrate the whole school system so that when able teachers are no longer with us we will not have lost the benefits of their years of work with children.

✓ 4 A supervisory program operating along democratic lines where faith in human nature is the keynote, will mean that teachers and patrons, principals and supervisors will pool their ideas, their abilities, and their experiences in an effort to provide the best possible education for children.

Provision for the Emotional Needs of Teachers

Various authorities [1] have pointed toward two main emotional needs; the feeling of the need for security and the need for adequacy. Every human being must think well of himself. Each must be a respected member of a group if he is to have a feeling of security and adequacy. No human being is so sick as the one who regards himself to be no good.

In meeting the needs of children we have talked much about helping each child to succeed. We have a flexible curriculum adapted to individual differences that will make it possible for each individual to work at his own level and at his own tempo. We know the importance of an atmosphere devoid of tension and in which each individual is respected for what he may be able to contribute.

[1] James S. Plant, *Personality and the Cultural Pattern*. New York: The Commonwealth Fund, 1937, chap. V.

Have we been as wise and as sound in our guidance of teachers? Individual differences in ability are just as wide among adults as among children. We must begin with teachers where we find them, help them to grow step by step, help them to succeed in ways that are possible for them, regardless of what some other teacher next door may be achieving.

If teachers can be made to feel that there are many acceptable ways to do everything, that no one pattern is the right pattern, that perfection is not expected, more security will be built for them and more spontaneity of effort will be engendered. One does not willingly venture into new fields of experience unless he feels sure of himself. Modest innovations should be encouraged. Small successes will open the way to further growth.

Pressure to live up to a certain standard which some individuals are not able to attain this week or this month should be removed and the spirit of competition among teachers discouraged, if we are to safeguard emotional stability in the teaching staff. Our goal should be to help each teacher to do her best with the abilities which she has and not press her beyond her power to succeed. This takes careful handling and great understanding on the part of the supervisor. Methods of improving practice should be carefully evaluated. Disguised coercion is more devastating to the integrity of the personality than readily recognized commands. The teacher can protect herself against open dictatorship but she has no defense against the more subtle forms of coercion.

When we see a teacher who is nervous, or irritable, or pugnacious and fault finding we must remember that these characteristics have grown as a result of frustrations and pressures in the teacher's own life. Supervisors have a great responsibility to help those teachers make a more wholesome adjustment to life. If we can help them recognize and capitalize upon their strengths and make them feel that their contributions are needed and wanted we will do much for the individual teacher as well as for the children with whom she comes in contact.

The supervisor must lead the way in the establishment of friendliness and good feeling. By his lack of artificiality, by his downrightness and by his honest expression of warmth the way will be paved for teacher growth. In an atmosphere of friendliness the teachers will be more communicative and through this communication the supervisor can more accurately sense the needs and the frustrations which make for insecurity. One is communicative only where a warm feeling of comradeship prevails. Supervisors must be ready and able to listen as well as to tell.

There can be no principles set up as to how the supervisor shall establish feelings of security and adequacy because it is a personal and an individual matter but a supervisor using democratic methods of dealing with human beings will be able to detect each teacher's need for assistance in achieving success in particular situations and by rendering the assistance, help to build a feeling of adequacy.

Much of the inadequacy and frustration of our times results from our inability to see the products of our labor. If the individual is helped to plan, execute, and evaluate his own work, he will have a feeling of accomplishment as he goes along. He will not need to wait for some one to tell him his work was well done.

Supervisory service should improve the quality of living of the individuals it presumes to serve by meeting the emotional needs of security and adequacy if it is truly democratic.

Assumption of Definite Responsibility by the Teaching Staff

If teachers are to have the rights and privileges which democratic methods in supervision insure for them, then they must be willing to assume the responsibilities which these rights carry with them. If external authority is removed it must be replaced by the intelligent authority of the group acting for the good of the group. A democratic group, in order to use its personnel efficiently, must have a clearly defined policy to guide its actions. The teaching staff must know what it wants to do before it selects people to do it. It must know exactly what jobs have to be done in order to carry out this policy, and the qualifications of the persons needed for each job. If the teaching staff has the power to appoint representatives to serve on committees to determine policies and carry forward the work of the schools these representatives must be chosen with intelligence and care. Representatives must be chosen because they are fitted for the work. Those who appoint must press beyond superficial qualifications of their representatives to those which indicate particular fitness for the job in question. Abilities must be appraised in the light of the responsibilities which the representation demands.

When the choices have been made the group must empower their spokesmen with authority commensurate with their responsibilities. They must be held responsible to the body which chose them. They should make frequent reports of their accomplishments and be willing to subject them to rigorous review and criticisms. But the policy-changing and the policy-making authority should remain with those who have been carefully chosen to do the work.

Every privilege entails a corresponding duty, every authority a responsibility, every responsibility an accounting. Teachers must recognize that the job of a teacher includes more than the teaching of classes. They must understand that supervision and teaching have one common purpose, to provide conditions most favorable to adequate education for all children. It is only in this way that purposeful and skilled action for the common good can be attained.

There is much wasteful activity in the name of democracy. There are many routine matters which should be decided by some one who is in a

strategic position and allow the participation of the teaching staff to center in those things which have significance for the work in which they are engaged.

Few schools have developed democratic methods without great leaders in administrative and supervisory positions. Efficient democracy demands that we make full use of the expert in executing policies democratically conceived. Those of us concerned with supervision must be ready and able to meet the responsibilities which are ours with clarity of purpose, with wise handling of human beings, with the determination to constantly evaluate our procedures that they may promote the welfare of the total group.

The Educational Policies Commission lists a number of questions which may serve as guides in evaluating our present practice and our future activities in furthering democratic methods in supervision.

> . . . Does your school morale improve with every expansion of the base of participation in policy-making? Do teachers feel that their opinions really count on important questions? Do the teaching and administrative staffs work in harmony because they have a common vision of the job to be done, . . . a mutual respect for each person's contribution? Does the lay public participate in the discussion of citizenship education and co-operate in carrying it forward? Is there a two-way street for the flow of ideas between the public and the teaching profession? Are teachers' organizations themselves examples of efficient democracy? Do students also share generously in the processes of discussing and deciding educational policy? . . .[1]

If we can answer "yes" to these questions we should see a greater growth in our own attainment of democratic methods in supervision than we have seen in the past half century.

The task is not easy. The road is long. How well we will succeed will depend upon how deeply rooted our faith is in democracy as the best way of life.

[1] Educational Policies Commission, *Learning the Ways of Democracy: A Case Book in Civic Education.* Washington: Educational Policies Commission, National Education Association and American Association of School Administrators, 1940, p. 475.

DEMOCRACY IN SCHOOL ADMINISTRATION

Ray B. Dean, *Principal, David Lubin School, Sacramento*

In this era of rediscovering and reapplying the principles of democracy to all phases of our lives it is fitting that educators consider carefully the principles of democracy as applied to the operation of the schools. In general, the public schools of America always have been more or less democratic in nature. On the whole, they have been free and equal to all the children of all the people, and they have been under the democratic control of the people. The people, however, have found it feasible to delegate control of the schools to school boards, and school boards, in most cases, have delegated authority to operate the schools to a single individual known as the superintendent of schools. It is in the use of this delegated authority to administer the schools that little attention has been paid to democratic principles of operation. It is with this phase of school control that we are concerned when we speak of democracy in school administration.

Before we discuss this phase of school control, however, we should make sure that we understand and appreciate the relationship of professional school administration to the broader control of the schools by the people. Several rather obvious statements may serve to clarify and to emphasize this relationship:

Firstly, the public schools of America belong to the people and are under the control of the people through the representatives of the people.

Secondly, the people have expressed their will in regard to schools through state constitutions, state laws, and board of education regulations and rulings.

Thirdly, the public schools of America are financed by the people through their federal, state, and local agencies.

Fourthly, school administration, whether autocratic or democratic in nature, must move within the laws, rulings, and policies set up by the official agencies of the people.

Fifthly, the teaching profession at no time has authority to supersede the laws and rulings of the representatives of the people. This is true regardless of whether the teaching staff participates democratically in the operation of the schools, or whether the administrative officers use autocratic methods in operating the schools.

In short, the people are supreme in their control over the public schools. This means all the people, of course, and not minority pressure groups except

as such minority groups may convince the people that their stand is correct. Sometimes certain individuals and certain groups, in their enthusiasm for democratic control within the profession, are apt to assume that such democratic control means final authority. The democratic operation of the schools by the teaching profession usually will not conflict with the control of the schools by the people, but if such conflicts do arise it must be recognized that the people have the final authority.

It is within the State Constitution, laws passed by the Legislature, and policies set up by the board of education that a wide field of operation exists, the administrative characteristics of which may be either autocratic or democratic. There can be little doubt that this field of operation, until rather recently, has been autocratic both in theory and practice. Most of the literature published on the subject of school administration during the first twenty-five years of this century advocated school management similar to that of big business and the manufacturing industry. The successful school superintendent was thought to be a clever, "efficiency-expert" type of person whose dynamic orders caused the entire school system to scintillate. He was a leader of the dictator type, a domineering boss to whom loyalty and obedience was of the first order. Since an inner administrative light always guided him aright there was no need for high intelligence or originality on the part of his subordinates. He planned the work, he told the teachers how it had to be done, and they did it according to specifications. He was the chairman of the board of directors, the chief executive, and the sales manager all merged into one splendid supereducational being. The slightest indication on his part that he did not know all the answers, or that he was not prepared to make immediate decisions on all matters pertaining to education, was a sign of weakness.

The school principals were glorified straw bosses. It was their function to carry out the dictates of the superintendent and to exercise a certain amount of dictatorial powers in their own right. In fact, because of their direct control over the teachers in their buildings, their petty dictatorships were most obnoxious. Such dictator-type principals often operated mechanically efficient schools, manned by strained and repressed teachers attempting to teach frightened and cowed children how to live in a democracy. So thoroughly had this type of autocratic school administration been established that, in most cases, it was accepted gracefully by the teaching staff. Only in rare individual cases were objections raised, and then usually by the cranks and misfits in the profession.

The trend at the present time, if we may judge by writings in the field of school administration, and by pronouncements of educational leaders, is from autocracy in administration toward democracy in administration. It is the assumption of this statement that the trend toward democracy in administration is a move in the right direction. In agreement with this

assumption is the following statement of the Educational Policies Commission:

> Our schools are organized for the purpose of educating children, young people, and adults for participation in democratic society. Any significant realization of this purpose will require independent thinking, a large degree of cooperative endeavor, and a broad sympathy and understanding on the part of all who are enrolled in educational institutions. Certainly these virtues may not be expected to abound among those who are taught unless they are found also in the experience of teachers. Surely in no area may teachers more certainly exercise independence of thought, cooperation in action, and social understanding than in their daily professional work. It is sound procedure to provide for the active participation of teachers in the development of administrative policy. The formulation of school policy should be a cooperative process capitalizing the intellectual resources of the whole staff. This participation in the development of educational policy should not be thought of as a favor granted by the administration, but rather as a right and an obligation. Some plan should be provided through which the constructive thinking of all the workers in a school system may be utilized. After policies have been developed by the staff, they should be submitted to the board of education for final review and approval. When approved, every member of the school system for whom it has implications becomes responsible for carrying into effect the adopted policy. This procedure promotes efficiency through individual understanding of policies and through the acceptance of joint responsibility for carrying them into effect. What is more important, it provides a democratic process through which growth in service is promoted, and the school service itself profits from the application of heightened morale and of group thinking on school problems. It makes the school in reality a unit of democracy in its task of preparing citizens for our democratic society.[1]

Many similar statements from authoritative sources are available to strengthen the assumption that democracy in school administration is desirable. One more statement from Alton Scott, state president of the California Elementary School Principals Association, may suffice:

> The democratic philosophy requires that every teacher, within the limits of her interests and abilities, must be permitted and encouraged to participate in the formation of aims, methods, policies and materials of the school of which she is a part. We cannot honestly expect teachers to accept an educational program which gives pupils more freedom from set, rigid objectives and methods, when the teachers are dominated by the minds of those few who happen to be "in charge." The evolution must encompass all phases of the school; it cannot succeed otherwise. Only teachers who are privileged to assume responsibility and to exercise initiative can fully bestow such privileges upon their pupils.[2]

[1] Educational Policies Commission, *The Structure and Administration of Education in American Democracy*. Washington: Educational Policies Commission, National Education Association and American Association of School Administrators, 1938, pp. 66-68.

[2] *The Elementary Principal as Supervisor in the Modern School*. Eleventh Yearbook of the California Elementary School Principals Association. California Elementary School Principals Association (Sarah L. Young, Parker School, Oakland), 1939, pp. 52-53.

If we accept the assumption that democracy in school administration is desirable, what are some of the essentials for obtaining a program of democratic cooperation and participation in school administration? From a personal angle, what can we do, as elementary principals and district superintendents, to implement democratic participation in school administration?

In the first place, as administrators, we can acknowledge that in the recent past, and for the most part in the present, teachers have had little or no word in decisions that affect vitally their personal security, professional advancement, and conditions of work. While there are exceptions, this condition is so commonly true that an acknowledgment of it on the part of administrators is essential to a sound beginning.

In the second place, we need to recognize that teachers are capable of thinking creatively about administrative problems and will gladly do so, in most cases, if given the opportunity. Not to accord teachers this privilege is to deprive them of the opportunty for creative growth, and to deprive the school system of the maximum contributions of the staff.

In the third place, we should regard democratic decisions as worth the time and effort that must be expended to secure them. Democratic administration may be more difficult to operate than the traditional type of administration, but it is more efficient, more productive, and more satisfying in the long run. We administrators must be willing to spend effort to overcome the difficulty of getting teachers to cooperate in democratic control. We must educate them out of their past authoritarian training in schools, and help them to realize both the advantages and the responsibilities of democratic participation.

In the fourth place, we need to recognize that repression breeds resentment while free expression and participation in administrative activities are the best means of establishing mentally healthy attitudes.

In the fifth place, we, as citizens of a democracy, must realize our obligation to promote the functioning of the democratic way of life in all our relationships, including our professional work in the schools. If democracy is the best way of life, as most of us believe, we should do more than talk about it and praise it—we should live by it.

If we accept these essential principles for obtaining a program of democratic co-operation and participation of teachers in school administration, the next question might well be, What techniques are necessary in order to facilitate the program? The answer seems to be that the transition from autocratic to democratic administration cannot be accomplished by the establishment of a particular set of administrative techniques. The essential element of democracy is an attitude rather than a set of techniques. It is conceivable that a democratic paper-form of administration may be nullified by an autocratic leader. As Harold Blome and Clark Robinson have pointed out so adequately, "Democratic Structure Does Not Guarantee Democratic

Procedure."[1] Conversely, a formal type of organization may operate democratically due to the democratic attitude of the administrative leaders. The democratic attitude is the essential element. This being present, the administrator with the aid of his staff can gradually develop the techniques that seem best to fit democratic purposes in the situation.

In this development every teacher should share in molding the entire school program to the fullest extent that the situation permits and his own capacity warrants. Sharing in the building of the various aspects of the school program is a splendid opportunity for every teacher to expand his outlook and to become a constantly growing personality rather than a static technician. The teacher must be willing to share not only on the basis of his present capacity and attitude but also to grow in these attributes. Thus, there is indicated a gradual transition from autocratic to democratic administration, rather than the accomplishment of this objective at one fell swoop by administrative edict, or by the establishment of a set of administrative techniques.

A rising tide of sentiment in favor of democracy in school administration is evidenced by the educational literature of the present day and by recent professional discussions on the subject. Teachers are becoming more and more conscious of the advantages that accrue to education in general, and to classroom teachers in particular, through the substitution of democratic management for the traditional administrative pattern of personal rule. Superintendents and principals are beginning to realize that true efficiency and progress are accelerated by a democratic type of administration which utilizes the resources of the entire staff. School boards are looking askance at dictatorial administrators who control supposedly democratic schools for a democratic people. Teachers, administrators, and board members are on the move in the direction of a new and improved type of school administration based on the principles of democracy.

[1] *Ibid.*, pp. 58-60.

SOME GUIDES FOR THE IMPROVEMENT OF ELEMENTARY EDUCATION

KENNETH E. OBERHOLTZER, *City Superintendent of Schools, Long Beach*

Education at the elementary level is concerned with the education of children from the time they leave their homes for their first school until they go into the secondary schools. While we have made notable progress, I believe that there are some areas in which we may seek improvement. Therefore, I have developed for your consideration some five principal guides that may be helpful in the improvement of elementary education. They are as follows.

1. We should include more application of the findings of educational research in our classrooms. I refer here to the great body of good educational research which has emanated from our schools of education, from laboratories, from school systems, and from national educational organizations. If we were to apply the significant findings now known in the field of reading alone, we would make great improvements. I should add, however, that I believe we are doing a better job in teaching reading today than we have ever done before.

This emphasis upon research does not mean experimentation by oneself in the classroom unless one is adequately equipped and understands both the elements of experimentation and evaluation. (This admonition applies generally to the early years of teaching.) One of the areas of greatest challenge for elementary school principals is in the problem of making available to teachers the most significant results of educational research that have a bearing upon the elementary school program.

It is necessary that we maintain the (research) attitude in our schoolrooms and in our schools. By this I mean that we should endeavor at all times to have a healthy sense of objectivity. This would include rational balance between subjective and objective means of evaluating our school practices. A few years ago, we swung to the extreme of standardized tests as a means of evaluating our schools and then we swung to the other extreme of evaluating only in terms of subjective tests. We should strive to achieve a balance between these useful types.

2. The schools should be more deeply rooted in the life of the community. Please note that the emphasis is *in* the life of the community. Sometimes our curriculum is concerned *with* the community and *about* the community, but it is not really *in* the community. An application of this idea would involve a great many rich contacts with both community agencies and outstanding community personalities. There is much to be gained in the enlistment of parental aid in educational planning for elementary schools.

Perhaps we should heed the experience of adult schools in this regard. They have found that advisory committees are both necessary and highly useful in the development of their curriculum. This matter of parental aid in educational planning would apply to both individual teachers and to faculties.

3. We should re-examine the concept of growth of individual boys and girls in the terms of a culture or society. This involves three major aspects:

a) Encouraging and developing a bigger individual;

b) Developing or directing new abilities, or purposes, or ideals as the individual expands or grows bigger;

c) Integrating or bringing the developing parts into a functional unity in the expanding or growing individual.

If we were to gain an adequate understanding for an application of this concept of growth, I believe the word "remedial" would virtually disappear from our educational vocabulary. No longer would we speak of remedial classes in reading or remedial classes in spelling.

4. We should practice more faithfully the tenets of good guidance. It takes a teacher of exceptional skill to do this with from 30 to 50 children in a room. Yet even under these circumstances, I believe there are some ideas that may be helpful. We can strive to make arrangements whereby a given group of children has a longer time with a given teacher. In some instances, this may involve a change from semiannual to annual promotion. In others, it may mean a change from one to two years with the same teacher. Where circumstances make it possible and feasible we should endeavor to secure smaller numbers in the classes. Greater efforts should be made to study each girl and boy, using both subjective and objective methods. Tests, score sheets, and the like are but means to the end of studying the girls and boys.

In our larger school systems it may be possible to give assistance to teachers in the realm of guidance through certain experts. I believe that these experts should be essentially helpers for teachers. Studies of guidance indicate that pupils value most highly that guidance which has come to them through their teachers. There will be times when the expert should work directly with the pupils, but in most instances, he should work through the teachers. Yet at all times, there should be a realization that guidance is not synonymous with education, but that it is rather an emphasis in education, a part of it, an integral part of it.

5. We should make more positive contributions to the democratic way of living. This involves a purposing, planning, selecting, managing, and evaluating of one's own experiences as a pupil both at school and at home with the family. It also involves from the earliest days in the elementary schools different methods for cultivating wide acquaintance of pupils in rooms and in schools. There is, furthermore, the desirability of making very

definite provision for child service activity both in the school and in the home. Democracy rests upon a feeling of importance for every individual, and this can be cultivated best through some meaningful service activities.

In conclusion, it seems to me that this concept also involves establishing very early in the minds of children a belief in the wisdom of arriving at decisions, and of acting in accord with decisions that have been reached after the pooling of opinions of all who were concerned. If the school is to remain one of the vital social institutions in a democracy, the latter must prevail.

OBSERVATION IN EDUCATION [1]

Willis W. Clark, *Director of Research and Guidance, Los Angeles County*

The teacher is constantly observing as well as teaching. The questions arise: To what extent are the important things being observed? Is there a recognition of significant behavior and a proper interpretation of activity? Are underlying causes, rather than outward symptoms, being given consideration? What courses of action are planned as a result of observations made?

There is now an increasing emphasis on and encouragement of purposeful observing on the part of all engaged in educational activities. It is, therefore, highly desirable that the nature and characteristics of observation be considered, so that the possibilities and limitations of this process may be recognized and understood.

It is the purpose of this report to present some of the factors related to observation, as follows: I. Introduction; II. The Process of Observation; III. The Qualified Observer; IV. Implications for Education.

Introduction

The purpose of this report is to consider the processes and techniques of observation as they relate to education. An effort is made to examine the nature of observation and its possibilities and limitations. Also, attention is given to the role which it may play as an instrument for a better understanding of child growth and development, the teaching-learning process, and, in general, the factors related to the effective conduct of the educational program.

Observation is one of the characteristic conscious responses by all persons.[2] It permeates all activity, whether simple or complex, as it is concerned with those things which are given attention and to which meanings are attributed.

Teachers, supervisors, and educators in general are being encouraged to give more attention to the growth and developmental needs of individuals and to give more time to observation of pupils and learning situations. Therefore it is pertinent to inquire into the nature and characteristics of the process of observation.

Woodworth has the following definition:

> Observation means the process of coming to know objects by use of the senses . . . There are two steps in observation, which may be called

[1] This paper was prepared at the Workshop in Teacher Education, American Council on Education, University of Chicago, August, 1940.

[2] Although not within the scope of this report, it may be stated that all forms of animal life observe (within the limits of their sensory apparatus and of their capacities to make responses) as a basic organic function required for security, survival, and satisfaction of needs.

attention and *perception*. Attention is preparatory to perception. Attention brings the observer into the presence of a fact, and perception consists in his grasping or knowing the fact.[1]

Because of constant activity and interaction, the school provides inherently a continual series of "observation" situations. It is this fact which makes it a potential gold mine for intelligent and purposeful observation. Needless to say, observations are occurring continually throughout the school day.

Whether significant things are being given attention, and whether appropriate meanings are given to the behavior observed, is the question. It is obvious that some teachers and supervisors may be attending to the inconsequential and ignoring the significant. Likewise, the interpretations and courses of action which they perceive to be appropriate are of varying merit.

Thus it becomes pertinent to inquire into the nature of observation and the means which may be used to assure that observations will be accurate, realistic, and valid.

Observation is essentially a psychological process. The things to which attention is given and the significances attributed to them are primarily inherent in the observer. To quote from Woodworth:

> What shall be observed in a complex presented situation is determined not only by such factors as intensity, suddenness, and movement of a stimulus and performed habits of attention, but very much by the interest that is momentarily dominant. The present interest is a drive selecting certain objects for observation. Interest sometimes takes the definite form of a question, and objects which have been overlooked a hundred times will come into notice when a question is asked regarding them. . . . We do not become scientific observers by simply going out into the presence of nature with the general intention of observing, but by first getting some question in mind which we can answer by observation of nature. General familiarity with a thing, in the sense of having lived with it, does not qualify one as a scientific expert regarding that thing. One may prove to have little exact knowledge regarding a familiar thing simply because one has been satisfied with a very summary observation of it and has taken it thenceforward as a "matter of course."[2]

Thus, it may be stated that a consideration of observation in education relates (1) to the nature and characteristics of the observer, and (2) to the attributes and significance of situations, materials, and persons. It also involves the observer's working premises and assumptions regarding the nature of reality, growth, learning, values, and the like.

As the process of observation is primarily a function of the observer, one of the most important considerations is the nature of the process, including an understanding of limitations and possibilities. This will be considered in some detail in the next succeeding section of this report.

[1] Robert S. Woodworth. *Psychology*. New York: Henry Holt & Co., 1929, p. 365.

[2] Robert S. Woodworth. *Dynamic Psychology*. New York: Columbia University Press, 1925, pp. 121 ff. Used by permission of the publisher.

Even though the process of observation is an individual personal matter, for purposes of this report it is assumed that those objects, things, other persons, etc., which appear to reasonably competent observers to have existence, really do exist. Hence, there is the desirability of describing the characteristics of those situations, materials, and persons. There is also the necessity for recognizing the assumptions and working principles which establish values and which underlie, motivate, or guide a course of action.

Observation is obviously an essential element in the teaching-learning situation. Education as a social function has a structure of situations, materials, and persons presumably directed toward more or less specific objectives or ends-in-view by use of selected procedures. It attains a variety of outcomes or products.

Observation, as a technique, should aid continually in the evaluation of these purposes, procedures, and products. Sometimes observation will be simple and informal, sometimes controlled and directed toward the solution of more involved situations. Always, to be useful, appropriate, and effective, it will need to conform to principles of method and interpretation which will assure validity of description and judgment.

Administrative recognition of the significance of observation should be given so that it (as a technique) will have the time and opportunity of functioning in the educational situation.

The Process of Observation

In the preceding section, it has been stated that observation is essentially a psychological process. It functions through the sense organs (receptors) and the stimuli thus received are interpreted by the observer in relation to his particular background of experience. In view of the continued occurrence and practical necessity of informal as well as controlled observation in the school situation, it appears desirable to give consideration to some of the factors involved in the process of observation.

The observer receives stimuli through the organic receptors; i.e., sense organs which provide for vision, hearing, smelling, tasting, kinesthetic sensations, cold, pain, and the like. These receptors are specialized structures with selective sensitivity to certain kinds and limited forms of stimulation. Thus, it is obvious that there are inherent limitations to the possibility of direct observation in each person. Furthermore, those situations which may come to attention of normal individuals may not be observed by others who are handicapped by sensory defects.

It is also pertinent to mention that psychologists recognize that persons are more apt to give attention in response to stimulus to some objects or situations rather than others dependent on such factors as (1) movement or change; (2) strength or intensity; (3) repetition; (4) striking quality; (5) definite form. Also the individual learns what seems to be worth noticing,

and what is not, and thus forms habits of attention and inattention. These interpretations, however, are a matter of understanding and hence are perceptions.

The observer responds to or interprets the stimuli which have been received in terms of understandings or perceptions. The quality of his perceptions and the functioning of mental processes in the interpretation of meanings are obviously related to his background of experience, his values and attitudes, and his mental maturity.

The observer's background of experience includes situations which have been more or less consciously interpreted or conditioned in relation to their satisfaction of fundamental or organic need. These experiences have also provided knowledge of maxims, rules, laws, or principles as desirable courses of action. The observer's experience also includes more subtle and often ignored factors in the form of social or cultural background. These latter factors may and usually do condition many of the observer's values and attitudes. Hence, he may be unconsciously projecting criteria regarding the significance of conduct which may or may not be appropriate for sex, age, class, race, and the like. (cf. Prescott)

It is thus clear that the observer should endeavor to define his concepts and recognize and clarify assumptions which are operative in his interpretations and judgments. As will be discussed in succeeding paragraphs and in the concluding section, the trained observer endeavors to objectify and define the concepts and to recognize other considerations which provide hazards when subjective judgments are made.

Likewise, due to the inherent limitations of human intelligence in the ability to recall, in association of meanings, in logical and mathematical reasoning, and in reaction time, the trained observer does not hesitate to develop and use (and in many cases recognize the absolute necessity for) devices and instruments which will implement himself in such a way as to overcome weaknesses and limitations inherent in subjective descriptions and judgments.

As previously indicated, the objects of observation are deemed to exist in fact. However, it should again be reiterated that the characteristics attributed to situations, materials, and persons are best thought of as assumptions or working premises. For example, the following analysis will indicate broadly the presumed nature of the "objects" of observation in education:

1. Consist of structure, reality, dynamics, and objectivity in time and space.
2. Have attributed to it or them values and significances dependent on the culture pattern and the experiential background of individuals or social groups.
3. Persons, in addition, have the characteristics of organic life, with growth patterns, basic needs, and psychological processes.

It should also be mentioned that, in education, there are continual changes and developments in regard to both situations and persons. This is particularly significant in the practical problem of assuring that descriptions and judgments will be useful not only in immediate cross-sectional analyses but also in developmental or longitudinal studies.

Thus we find that observation is primarily a function of the observer. The observer is always a part of the observation in that he senses the evidences and interprets their significance. The qualified observer, as the occasion requires, will implement his personal abilities with instruments or devices in order to secure more objective descriptions of evidences or significant factors and in order to arrive at more valid judgments or conclusions.

The Qualified Observer

Some of the essential characteristics of the trained and well-qualified observer are presented in this section of the report. As previously indicated, the observer should recognize the psychological nature of observation and the inherent difficulties in remembering and interpreting details. For these reasons he will endeavor to eliminate the subjective element by clarifying his purposes, by recognizing his assumptions, and by utilizing objective methods of description and interpretation to the extent that it appears feasible and necessary in a given situation. In other words, he will acquire the scientific attitude.

The word "scientific" is derived from the Latin words *scientia,* knowledge, and *facere,* to make. An attitude is "a tendency to act." Thus, the scientific attitude may be defined as a tendency to act to make knowledge.

This implies that the observer will consciously endeavor to avoid bias and emotional reactions, substituting therefor a more objective and impersonal approach. This greater objectivity, of course, does not mean that the personal relationship of friendliness, pleasantness, and other normal behaviors essential for rapport should be eliminated. In fact, a recognition of the importance of maintaining normal and customary relationships in the situation would assure a greater objectivity and validity in any observational problem.

In the process of experiencing and reconstruction of experience, each person has developed a symbolization of concepts, ideas, and beliefs. With increased experience, there has come an association, a classification, and an organization of these symbols as concepts which provide instruments for mental activity.

Objective method requires a clarification of meanings by definition of word symbols and by an organization or classification of concepts. This is readily illustrated by the human necessity of making an analysis of a problem, or of recognizing the aspects of a learning situation, or of examining elements or factors in a diagnostic test.

Objective method recognizes qualitative and quantitative differences in the description of situations. It is also characterized by use of principles of logic and of mathematics in the solution of difficult problems and in the interpretation of meanings.

The high degree of objectivity which is required of competent observers in many scientific fields is obtained by:

1. Definition and clarification of concepts used
2. Understanding of purposes of the observation
3. Practice or guidance in making observations
4. Use of instruments or devices containing analyses and descriptions
5. Use of instruments or devices for quantitative appraisal
6. Use of graphic and statistical methods in determining trends, relationships, and probabilities

The observer will desire to objectify his methods as far as is feasible or necessary depending on the accuracy and continuity of observation required. These methods may be classified as:

A. Techniques of description and recording
B. Techniques of appraisal and interpretation

As previously stated, behavior is perceived or understood by the observer as symbolized concepts. It is obvious that there needs to be a common understanding of the meanings which are attributed to these word symbols. Therefore, it is recognized that the terms used in all observation should be clearly defined, or their meanings readily understood.

For purposes of understanding the significance of behavior it is necessary, because of human limitations, to classify areas of experience so that relationships may be recognized and given consideration. Thus, for convenience, it is often desirable that there be an organization or classification of concepts on a functional, sometimes logical, basis.

Among the instruments or procedures which are often used to "implement" the observer are devices for making controlled observations. These may vary from simple questions or items which give direction to observation of pupils and situations in normal classroom activities or on the playground to more complicated exercises, tests, and other definitely controlled laboratory-type instruments.

Other types of devices or instruments which are used to "implement" observation are those for recording *descriptions and evidences* such as rating scales, check lists, analysis forms, interview record sheets, anecdotal record plans, cumulative records, and the like.

A third device for aiding observation is the securing of samples of products such as art, written expression, free response to questions which become objects for later interpretation as to probable meanings.

Recognizing the limitations and subjective nature of personal judgment, the competent observer appreciates the necessity, in the interpretation of many kinds of observations, of utilizing objective criteria. These are such devices as scales, grade or age norms, percentile norms, standards, and the like. Rather frequently these devices for aiding judgment are a component part of tests and rating devices. However, their function is to aid the observer in arriving at more accurate and valid judgments of the descriptive or behavior evidences obtained than would be possible if he relied on personal experience and impressions alone.

It should be mentioned that the competent observer recognizes that all observations and judgments have varying degrees of accuracy. He will utilize, as far as necessary, the statistical devices and formulae for estimating the probable error of observations and judgments. These items are ordinarily expressed as reliabilities, indices of validity, probable error of estimate, and the like.

In view of the continuous change and on-going nature of education, the observer will recognize the necessity of adequate (1) cross-sectional and (2) longitudinal reporting and recording of information and judgments regarding individuals and situations to indicate patterns and trends.

In the daily routine of observation and the necessity for continual and immediate decision, the trained observer must necessarily rely on a background of experience and come to conclusions as to appropriate procedures without reliance on the detail of objective method outlined above. However, these daily functional problems presumably are most satisfactorily considered and treated when the observer has a conscious realization of the important factors just discussed.

As mentioned in a previous paragraph, the competent observer has a purpose in all observations. These relate directly or indirectly to the aims, the procedures, or the outcomes which characterize the educational program.

All behavior is a reaction or response. From the point of view of the qualified observer, it is a symptom—an indication of some causal or related factor. It is assumed that there are causes for effects. In functional and dynamic situations there is a series of responses and cause and effect relationships.

One of the principal problems of the teacher, as an observer and as a guide or director of the learning process, is to understand and deal with relationships and to avoid the treatment of symptoms rather than the real causes.

The qualified observer, even though observing in a constantly changing situation which requires attention to many details and the making of a variety of decisions, recognizes the personal and psychological nature of the process. He therefore acquires the scientific attitude and utilizes the techniques of objective method in varying degrees of complexity.

Implications for Education

Some of the important factors discussed in the preceding sections of this report and their implications for education may be listed as follows:

1. Observation is an individual psychological process by the observer. Hence the significance of given observations is limited by the abilities and characteristics of the observer in sensory capacity and in understanding of meanings.
2. Observation is primarily limited to symptoms or evidences of structure or behavior. There is, therefore, a constant danger of misinterpretation by confusing form or symptoms with underlying causes or relationships. Thus there is the necessity to guard against treatment of symptoms rather than giving attention to significant factors or causes.
3. Teachers and educators in general are continually observing objects, situations, and persons, attributing meanings to them, and deciding upon courses of action. Thus the making of a proper interpretation of observed data to provide for valid judgment and an appropriate plan becomes of paramount concern.
4. Due to human limitations in sensory capacity, memory, reasoning ability, and other factors of intelligence, effective observation frequently requires controls and implementation. Competent observers use check lists, inventories, report forms, tests, norms, etc., to assure greater accuracy and comprehensiveness in their observations. In a sense, all test and measurement instruments are devices for observation.
5. In functional situations, the qualified observer (even though actively participating) recognizes the desirability of observing the behavior symptoms and evidences in descriptive and objective terms. Also, the course of action chosen in each instance represents an interpretation which is dependent on the observer's particular background of experience.
6. Observation in education has many aspects in common with other fields of endeavor which utilize scientific methods. In practice, it may learn many lessons regarding the limitations and possibilities of observation from applied sciences and related professions.
7. There is great need for careful consideration of the usefulness of observation techniques in the study and understanding of the dynamics of human behavior, and the educational significance of the direction and velocity of the various factors of growth and development.
8. In modern education, added emphasis is being given to guidance, to individual differences, and to basic human needs. It is acknowledged that each person must do his own learning. Both time and facilities for observation will need to be provided, perhaps by replacing some of the less essential time-consuming activities of the teacher-centered school.

THE MEANING SIDE OF READING

HELEN D. GIBBONS, *Department of Education, Santa Barbara State College*

The ability to read is one of the most important tools that a child can acquire in school. It is a tool which is essential to success in every other school subject. And perhaps more important, it makes possible self-education.

The ability to read means, first of all, the ability to understand quickly and accurately what is read. From this point of view children in first grade are better readers than are high school and college students. That is to say, children in first grade understand better the material given them to read than college students understand the books they have to read. Materials themselves become increasingly difficult to understand at successive grade levels. Consequently, at each grade level children must develop greater power in comprehending increasingly difficult materials. The development of this power not only must begin early in the elementary grades but also it must be continued in junior and senior high school if reading failures are to be prevented. At the present time there are too many children who simply do not have an accurate understanding of material which should be within their power of comprehension.

Two factors which are important in developing this power of comprehension or which effect the meaning side of reading are (1) the degree of readiness a reader possesses for reading a given piece of material and (2) the ability of the reader to construct in his own mind the meanings represented on the page. These factors are discussed in the sections on Readiness to Read, and Reading-Thinking Skills, which follow.

READINESS TO READ

Meanings which are achieved through reading are not inherent in and thus cannot be gotten from the printed page itself. Some of the meanings represented on the page already exist in the mind of the reader and the others must be constructed in his mind during reading. Readiness to read has to do with those meanings which a reader must bring to a given page in order to be able to read it. For example, in the majority of instances the meaning of a word cannot be learned merely by looking at the printed word or by pronouncing the word or even by using the context in which the word occurs. Such meanings cannot be constructed through reading and without them the reader cannot understand the context in which these words occur.

Thus the degree of understanding to be attained in reading depends first upon the number and quality of meanings which the child already possesses. If a child brings no meaning or if the meanings he brings to a printed page are vague and incorrect he can get no meaning from reading it or the understanding he does achieve will be hazy and incorrect.

It is appalling in testing word meanings to find how many faulty concepts which children struggle with in trying to arrive at an understanding of their required reading. Many geographic terms which we assume children must have learned accurately because of repeated use by the time they reach seventh and eight grade, are as follows: bay, timber line, peninsula, mountain range, rolling plains, and ocean current. These words occur frequently at various grade levels and are necessary to the understanding of much of the geography material they have read in preceding grades. These words were given to an unselected group of 100 children from fifth, sixth, seventh, and eighth grades.

Only three children in this group knew what a bay is in spite of the fact that they live within a few miles of one. Some of the answers given were as follows: (1) a bay is between two cities (2) a bay is an ocean (3) a bay is a bridge (4) a bay is sand and water (5) a bay is like a river. A large number of children had no idea of the meaning.

Only one child out of the hundred knew the meaning of the word "timber line." Most of them gave no answer at all while others said (1) that timber line was a mountain, or (2) that timber line was the edge of time or (3) that it was lots of trees.

Only 20 per cent of this group had an accurate concept of a mountain range. Examples of their errors are as follows: (1) a mountain range is a high part; (2) it is somebody who lives in the mountains; (3) it is the edge of the foothills and; (4) it is where the foothills start to get big.

Undoubtedly with maturity some of these misconceptions are clarified. On the other hand many of these confusions which are acquired probably in the elementary grades are never corrected. For example, one person with a master's degree still thought that the mouth of a river was the source of the river or where it began. Another graduate student who was teaching seventh-grade English said that "upstream" meant "up the ocean." When asked what "stream" meant, she said "a kind of a river" and then said that "upstream" meant "up the ocean near the shore by the river."

Many difficulties in understanding what is read may be prevented if each reading assignment is preceded by proper readiness tests and procedures. Obviously the concepts which a child does not already possess and which may be acquired through reading a given lesson need not and should not be developed in the readiness part of the lesson.

Thinking Side of Reading

As pointed out in the preceding section emphasis is placed on the meanings which a child must have before he is able to read a given piece of material. The thinking side of reading has to do with the meanings which are achieved through reading or the nature of the reading act itself.

Reading may be described as a mental process in which the mind is actively engaged in two types of activities (1) in recalling those meanings of words, phrases and even sentences which the reader already possesses and (2) in using these meanings to construct new meanings on the page. The first step in the reading process depends upon readiness to read. The most important part of the reading process, however, is the construction of new meanings. It is this aspect of reading that makes it an enjoyable activity, and, in reality, gives the chief purpose for reading at all.

New meanings may be constructed by two methods. First is the synthetic method in which new meanings are achieved by synthesizing or combining smaller units of meanings into larger organizations of meaning. Thus, word meanings are combined to make phrase meanings; word and phrase meanings are synthesized into sentence meanings; and sentence meanings are synthesized into paragraph meanings.

The synthetic method of constructing meanings may be illustrated as follows: To understand the phrase, "in ponds made by beaver dams," first the reader must recall the meanings of the words, "pond," "dam," and "beaver," that is, (1) a dam is an obstruction which prevents some of the water from going down stream, (2) a beaver is an animal. He builds his home in streams with trees, sticks and mud. (3) a pond is a small pool or body of water. With these meanings then the reader should be able to construct the meaning of the phrase "in ponds made by beaver dams." Some children are very skillful in their ability to combine smaller units of meaning into large organizations of meaning and other children find this process very difficult. For example, he knew the meaning of the words "beaver" and "dam" yet one child said that a beaver dam meant where beavers get water to drink. Another said that a beaver dam meant where there were lots of beavers. Another said that a beaver dam was a river where they have their homes. And still another child in sixth grade said that a "beaver dam" meant it held water back from beaver's home.

In a group of 30 unselected children from fifth and sixth grades only 50 per cent knew the meaning of the phrase "in ponds made by beaver dams." Some of the incorrect responses due to an inability to synthesize these word meanings into a phrase meaning are as follows:

"in ponds made by beaver dams" means

1. the water under the beaver's house
2. brush
3. a bank of trees
4. a little water in a swamp
5. a lot of water where beavers make their homes
6. where beavers get water to drink

Ten of the thirty children gave no answer at all or did not know what this phrase meant.

Another illustration of this ability to synthesize words into phrase meanings is seen in the phrase "spring wheat." Assuming that the child has never seen the phrase before but that he does know the meaning of the words "spring" and "wheat," it is possible for him to construct this phrase meaning, as follows. *Spring* is the time of year when things begin to grow. *Wheat* is a kind of grain. *Spring wheat* then must be wheat that is planted in the spring of the year. In constructing this meaning, one child said that *spring wheat* meant newly sprouted wheat. Another said that it meant wheat that grows fast.

Recent research [1] has shown that children may know the meanings of all of the words in a sentence and still fail to understand that sentence due to an inability to see relationships between parts of the sentence.

Thus the ability to synthesize smaller meanings into larger meanings is a crucial factor in ability to understand phrases, sentences, and paragraphs. In fact without this ability the child becomes a "word reader." If detected early and proper training is given, however, this type of reading difficulty can be prevented.

The second method of achieving new meanings through reading is that of constructing the meaning of a strange word, phrase, or sentence from the context in which it occurs. This process, in contrast, to the synthetic method requires first an understanding of the context itself and second the ability to analyze this larger organization of meaning and thus to determine the exact meaning of an individual word, phrase, or sentence. Consequently this process is called the analytic method of constructing meanings.

The ability to construct meanings from the context in which they occur is important (1) as a means of increasing one's vocabulary and (2) in determining the exact meaning of a word, phrase, or sentence in a given context.

Some children have developed this particular skill to a high degree and thus construct meanings from context accurately and quickly. Other children achieve no meaning, vague meanings or wrong meanings in constructing them from context.

For example, 9 children in third grade who did not know what the word "ensilage" meant were given the following sentence to read:

"Instead of waiting for the corn to ripen, many farmers cut it while it is green. Then they put both the stalks and ears through a machine which chops them in small pieces. In this form the corn is known as "ensilage."

These children were then asked to explain what "ensilage" means. Two children said that ensilage was a machine—a corn machine; two other children said that ensilage was corn when it was green.

[1] Helen D. Gibbons, "Reading and Sentence Elements," *Elementary English Review*, XVIII (February, 1941), 42-46.

This type of reading difficulty is, also, shown as follows: A group of children in fourth, fifth, sixth, and seventh grades who did not know the meaning of the phrase "pine barrens" were asked to read the following sentences and to try to construct the meaning from context.

"On the coastal plains of New Jersey there is a section where the sandy soils are so poor that for many years nothing but pine trees grew there. Today hundreds of acres in the "pine barrens" as these lands are called are cleared of trees and used for cranberry bogs." The answers given after reading these sentences are as follows:

Age of Child	*Definitions*
12 years	no response—did not know
13 years	"pine barrens" are trees—they grow hundreds of acres of them
12 years	"pine barrens" are trees used for cranberry bogs
12 years	"pine barrens"—a place where trees have been
11 years	"pine barrens" is land where the soil is sandy and they grow pine trees in it to fertilize it
10 years	"pine barrens" are a place for cranberries
8 years	"pine barrens" are berries off of pine trees that grow in a place where it is sandy
8 years	"pine barrens" means people made cranberries

Conclusion

Reading from the meaning side, therefore, requires a readiness to read and two important reading-thinking skills, namely (1) the ability to synthesize smaller units of meaning into larger organizations of meaning and (2) the ability to construct meanings from the context in which they occur. If proper training in readiness and the basal reading-thinking skills is provided at each grade level, however, many difficulties on the meaning side of reading may be prevented.

MODERN PRACTICES OF PROMISE IN PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL[1]

WINIFRED VAN HAGEN, *Chief, Bureau of Physical Education for Girls, Division of Physical and Health Education, California State Department of Education*

The play activities which in the last fifty years have been incorporated into the educational program have developed through the centuries of human history. The art of physical education as an expression of human necessity is not new. The engravings on ancient pottery, coins, parchments, tapestries, cloth, and paintings show that certain activities expressing a normal drive inherent in children and adults have continued as a part of the play life of human beings down through the ages. During the sixteenth century there lived in Holland a painter by the name of Pieter Breughel, called the Elder. His parents were tillers of the soil and cowherds. Through his paintings Breughel kept alive the earlier traditions of the Flemish school of art, the objective painting of things as seen. He faithfully reproduced the facial expressions, clothing, physical characteristics, and the games which he knew in the village of his day. In his painting "Children's Games" which shows a school playground, a distant meadow, a mill stream, and a business street, one is amused and surprised to see portrayed the activities of children of the present generation, such as riding a hobby horse, rolling hoops, climbing trees, rolling on a barrel, riding pickaback or on the clasped hands of two children; playing leapfrog, blindman's buff; working on such stunts as turning over a bar, head stands, somersault, walking on stilts both low and high; follow-the-leader, duck-on-the-rock; wrestling, spinning tops, striking and throwing objects, climbing on a horizontal ladder, running up the cellar door, dancing, swimming in the river, and organizing numerous dramatic games. The activities shown in the picture are largely based on the natural desire of human beings to throw, catch, grab, chase, climb, jump, carry, strike, and to dare greatly. The modern hunting games, as they are known today, are based on the urges experienced by children of earlier generations. Human nature has not changed significantly in many thousands of years. Neither has the method of developing the nervous system through use of the muscles changed. Strenuous muscular activity must be engaged in to develop a properly functioning nervous system.

School and public playgrounds today offer great opportunity for children to experiment with developmental materials. Modern city and village homes do not have sufficient play space in back yards nor provide trees to climb. Playgrounds provide traveling rings, giant strides, jungle gyms, hori-

[1] Adapted from an address presented at the Conference on Direction and Improvement of Instruction and on Child Welfare. Pasadena, October, 1940.

zontal bars and ladders, flying rings, and climbing ropes which substitute for the trees, barn roofs, or hay lofts of earlier generations.

Proper use of this equipment is emphasized and taught; the equipment itself is carefully inspected at frequent intervals. In the past few years excessive emphasis on safety has caused many school authorities to discard climbing and hanging equipment. Such action defeats a program of positive safety education through which safety attitudes are developed in the process of activity. Active children are always subject to accidents. This is true regardless whether the accident takes places in the home, the school, or in the community at large. Incidentally it should be noted that statistics show that more accidents to children occur in the home than elsewhere. Some way should be found to protect the schools and the taxpayers against the numerous lawsuits for liability because of accidents which happen during the normal school and play life of children and youth. If this way is not found, the play activities of children on school grounds and public playgrounds may be greatly hampered. Eventually legislative action may be necessary to effect such protection. An encouraging educational trend in some school systems is the reinstallation of pieces of apparatus that have been stored because of unjustifiable fear of accidents.

School boards and administrators as well as teachers must realize that skill in handling the body and the development of a finely co-ordinated nervous system is not gained by participation in passive types of activities but by repeated attempts to master the highly technical co-ordinations needed in order to handle the body successfully in relation to extraneous objects and the individual itself. Arm, shoulder, girdle, back, and abdominal muscle development are needed if postural mechanics of weight bearing, gravity, and correct joint articulation are to be effectively attained.

Society lauds the daring, the perserverance, and the evidence of mental capacity that is shown in a football game. The challenge to bravery, mental alertness, and physical prowess, is accepted as a courageous exemplification of stamina and endurance. It should be recognized emphatically that for children in the elementary school the physical education program may provide an equivalent opportunity to exercise such virtues as bravery, perseverance, and mental alertness in the stunt program, team games, work on the apparatus, swimming and diving, and the hunting games. For body building these activities are vital since they help the individual to secure improved lung capacity, heart power, physical and mental well-being.

More schools are providing adequate play equipment. For the younger children there are large blocks or boxes, long boards, stair-climbing frames, wheelbarrows, tricycles, wagons of generous size, low slides, and equipment placed at appropriate level to meet the needs of young children to hang, climb, or experiment.

For the older children there is more equipment and supplies including surfaced areas for games, balls of different size, bats, nets, posts, ground-

marking equipment, and hand equipment for many types of games. A class of forty children is not expected to learn to write adequately by supplying only one pen for the entire class; neither is it expected that the same group will learn to read with but one textbook. The children in school systems in which only one or two balls are supplied to the pupils of a classroom are actually hindered in the development of adequate skills in game situations. Balls and other play equipment are coming to be provided in more generous quantities. Only by actually handling balls thousands of times can skill be acquired by an individual. The expert basketball, baseball, or tennis player's skill is the result of much practice over the years, in addition to the training acquired by watching any single game as a spectator.

In the public schools one meets teachers who have striven to gain additional technical skill in posture-training techniques; others who have studied the folk dance, natural rhythms, clogging, or social-dancing techniques for use during class instruction periods. Others have studied volleyball, paddle tennis, handball, and additional activities in order better to prepare themselves to aid young people in acquiring correct technical approaches to new activities which will increase their enjoyment if they know how to perform them well.

More emphasis is being placed on what are technically called the individual and dual games. Battledore and shuttlecock with its modern offspring, badminton; shuffleboard, ring tennis, lawn tennis, and paddle tennis; archery, handball, basketball toss-up, six-hole basketball, croquet, fly casting, horseshoe pitching, tether ball, table tennis, roller skating, folk dancing, and social dancing are activities requiring one to four players. These activities provide pleasure, relaxation, and vigorous physical exercise through the years because of early established interest and skills.

Teacher-training institutions are giving more time for prospective teachers to gain ability to direct games and give correct instructions to their pupils. Great personal skill by teachers, although desirable, is not essential. However, teachers should master the techniques needed in different games or activities, for teachers who know the techniques of games will more readily identify errors of performance.

The place of physical education in the total school program should be a much larger one than it now occupies.[1]

Physical skills should be learned correctly and as early in life as is possible. The most important teaching in physical education therefore should occur in the nursery school, kindergarten, and elementary school years; yet too frequently teaching experts in physical education are found only in the secondary schools and colleges.

[1] Charles Harold McCloy, *Philosophical Bases for Physical Education.* New York: F. S. Crofts & Co., 1940. This recent book presents the latest point of view on the place of physical education in the total school program. It is recommended to teachers, supervisors, and administrators alike.

The possession of effective skills and habits results in feelings of emotional satisfaction and adequacy. The pleasure in games accompanied by a feeling of success lessens emotional strain and helps to develop integrated personality. Physical activity and personality have a close relationship.

In recent years there has been a decided increase in the number of activities being used at all educational levels. In addition to the practice of having children of the primary grade play together within recent years there has been a general attempt to provide at least biweekly occasions in which boys and girls in the upper grades join in games, sports, and other physical education activities together. The practice of segregating the boys on one side of the playground and girls on the other has persisted too long. An effort is being made in many schools to provide situations in which boys and girls study and play numerous games and enjoy social experiments together. Volleyball, nine-court basketball, hit pin baseball, paddle tennis, archery, tennis, kick ball, bat ball, table tennis, badminton, and shuffle board are activities in which boys and girls may have valuable play experiences together. Weekly instruction in folk dances and social dancing provides opportunity for boys and girls to practice the social amenities. Self-consciousness and awkardness disappear when repetition develops confidence in social situations. The game court, the gymnasium, and the sport field are great laboratories for helping youth to secure social experience and to establish wholesome relationships between boys and girls. Many fathers and mothers cannot supply the necessary guidance and facilities. The public schools provide the leadership and the equipment to help young people gain ease in life situations. Young people should not be left alone to get their ideas of conduct and standard of behavior in public dance halls and road houses. It is just as essential that children learn to be at ease socially as that they learn to spell, read, and cipher.

Decided progress in group educational thinking has been made by educators in working out the relationship between elementary schools within a given geographic area. For example, one county superintendent of schools, his supervisors, and his elementary teachers discussed together the question of whether or not to have a modern color playday for the county. On the one hand was proposed an occasion in which joy of participation, regardless of school affiliation, is the order of the day, the children returning home enthusiastic but not exhausted, none of them suffering a coat of sunburn, and all still having friendly feelings toward the neighboring schools; or, on the other hand, was the alternative of continuing the older accepted form of combined track meet and competitive game contests for boys and girls to determine county school championships in various fields. The color playday organization was voted although some misgivings were expressed by a few. The county superintendent wrote as follows when asked for a report on the success or failure of the new undertaking: ". . . despite the fact that I really

anticipated being on the receiving end of adverse criticism I was most agreeably surprised to find that the consensus of teacher opinion was most enthusiastic in boosting for the new type playday. This was especially true after the playday had come and gone and there had been time for every teacher to consider the day from every standpoint. What is even more important is the fact that the boys and girls themselves seemed to get actually more pleasure from the new type program which was provided. To sum up, the playday was a success."

It is a wholesome sign that the professional literature emphasizes the point of view that all children are entitled to an equal opportunity to participate in the activities offered. Striving for championships is disapproved if the need of the many children for development is neglected in order to exploit the superior ability of the few who least need the training. With increasing emphasis it is being recommended and in many places being put into effect, that there shall be no interschool leagues to determine championships for boys and girls in the elementary and junior high schools. Nationally we will be more aware of the development of physical education because of increased interest in new procedures. During these months of strain, because of wars and more wars, a committee has been at work on "A Plan for National Preparedness Through Health, Physical Education and Recreation in Schools and Camps." A portion of the proposed plan as it relates to the elementary schools follows:

> The schools must become ever increasingly vital centers for the education of youth. And the concept of education must be revised, its scope must be broadened and its program must be realistic. Periodically in America we become aroused over the unfitness of youth for war. The revelations of the draft inflame our emotions. We pass state laws, we establish programs of health and physical education, and then the academic mind in American education whittles down requirements, sabotages programs, and curtails activities.
>
> The schools must become social institutions, serving persons who compose society today and not an academic ideal of a bygone age. The whole person is to be educated and hence physical, social, aesthetic, and emotional educations must become vital experiences of youth along with the intellectual.
>
> . . . Time allotments for physical education in the elementary schools must be greatly extended. This will probably involve the lengthened school day. Opportunity for vigorous activities should be provided over a five- to six-hour daily program, which is a conservative estimate in regard to the time needs for building vitality in children of this age. This time might be divided into two groups:
>
> (a) Instructional periods—the time for actual teaching;
>
> (b) Laboratory periods—the time set aside more specifically for practicing the things taught in the instructional periods.
>
> To the limit of the ability of the institutions, physical education shall be given during the afternoon; Saturdays, holidays, and vacation periods

should be utilized. Development of clubs and teams that promote group co-operation is desirable.

. . . Courage, stamina, and endurance are essential conditions demanded in youth before military preparation begins. National preparedness reaches back into early childhood and youth; it rests upon vitality, strength, skills, quick and easy movements, endurance, and hardihood developed in schools and camps. . . ." [1]

There is a growing interest among elementary school teachers in what to do to improve the posture of children. McCloy writes: "The posture of the body should be dynamic, not static, that is, the posture should be the posture of action, not of 'attention'; of efficiency, not of rigidity."[2] The State Department of Education bulletin, *Physical Education in Small Rural Schools,* devotes seven pages to posture problems and suggests useful activities and devices for encouraging the improvement of posture consciousness.[3]

In these troubled times there has been expressed a belief in the desirability of having formal drills take the place of the present physical education activity program. Participation in stunts, team games, relays, dancing, and hunting games will do far more to build up the vigor of youth than any amount of formal drills. The drills belong to military training procedures for mature adults and not to the education of boys and girls of elementary and high school age. Formal drills do not give release from strain but increase the nervous tension by requiring close attention and suspense. The following quotation from an article taken from the *Schoolmaster and Woman Teacher's Chronicle* of London, reprinted in the National Education Journal, tells us somewhat of how educators in England, a war-driven country, face the problem of giving emotional release to the children:

Changes in the curriculum there are bound to be . . . those necessary to counteract the increasing strain which the war inevitably places upon children. Subjects will change, but frequently it is the *emphasis* on subjects that must be varied. Free activities, art, games, music, drama, dancing, and so on are probably the essentials of a war time curriculum, for in them the children find relief from emotional tension.[4]

[1] A Report of the National Preparedness Committee of the American Association for Health, Physical Education, and Recreation, a department of the National Education Association.

[2] Charles Harold McCloy, *op. cit.*, pp. 36-37

[3] *Physical Education in Small Rural Schools,* State of California Department of Education Bulletin, No. 2, April 15, 1938, pp. 13-20.

[4] H. G. Stead. "War and the Teacher," *Journal of the National Education Association of the United States,* XXIX (October, 1940), 198. (From an article in the *Schoolmaster and Woman Teacher's Chronicle,* London, 1940.

THE HEALTH PROGRAM IN RURAL SCHOOLS

Helen Heffernan, *Chief, Division of Elementary Education, California State Department of Education*

Problems related to the health of rural school children may be classified in three significant categories. First, consideration must be directed to those problems related to the school environment, the physical condition of the buildings and grounds; secondly, to the quantity and quality of health service, and thirdly, to the program of health instruction.

The Rural School Environment

Does the rural school provide proper standards of cleanliness, heating, lighting, sanitation, ventilation, seating, and safety to protect the health of children? Is the water supply ample, accessible, and of satisfactory quality?

The solution of the problem of a healthful school environment is a major responsibility of society. Society insists upon school attendance and therefore must guarantee those environmental conditions which safeguard the child's health while he is in attendance.

An inquiry was recently addressed to county health officers and county school nurses in California to secure a broad overview of the specific hygienic conditions which in their opinion needed correction in their rural schools. From 20 California counties supplying usable information to date, it appears that the most serious health hazard in rural schools relates to improper lighting. Two counties reported that lighting needed correction in more than 75 per cent of the rural schools; 4 counties reported that it needed correction in 50 to 75 per cent; and 8, that it needed correction in 25 to 50 per cent. In 14 out of 20 counties, inadequate and improper lighting constitutes a serious problem.

In from 50 to 75 per cent of the schools, inadequate seating provision constituted a serious problem in 6 counties, ventilation in 3 counties, cleanliness in 2 counties, and sanitation and water supply in 1 county each. In form 25 to 50 per cent of the schools, ventilation was a problem in 5 counties, heating in 4 counties, sanitation in 3 counties, cleanliness and water supply in 2 counties each, and seating and safety in 1 county each.

To quote a sampling from the report, counties made the following statements concerning major environmental problems:

The lighting is the outstanding problem in our rural schools

Children are seated according to grade rather than size of desk

No hot water!

Improper drainage of schoolyards

Schoolyards covered with weeds

Lighting and seating are our greatest problems

The seating is being improved

Piped water from wells is gradually being installed

Need better facilities for handling food now that more food is being served

The serving of lunches in rural schools where proper sinks, refrigeration, hot water, trained cooks are not available constitutes an outstanding problem

Questionable water supplies represent a major problem in some rural schools

No suitable rest rooms for pupils or teachers

As the writer studied these reports against a background of fifteen years of acquaintance with conditions in the rural schools of the state, the conviction grew that the most insidious factor in substandard conditions is that they engender complacency. Are we not likely to see the improvement which has occurred in many situations and forget the rigid, improperly adjusted, nailed-down seats, the limited play space, dim and gloomy classrooms, the absence of any provision for the preparation of a hot lunch, no provision for rest, no showers or hot water for bathing after strenuous play, toilet facilities which are grim and drear for the older children and positively frightening to the younger ones? All of these conditions are too frequently characteristic of rural schools.

Our professional literature is full of statements concerning health as a major objective of education, but conditions in our rural schools belie our words. With our present knowledge of the growth needs of children from six to sixteen, the school must attack its responsibility in regard to the physical well-being of children with conscious purpose.

The physical environment of our rural schools even as reported by counties sufficiently conscious of the problem to be able to report it is not such as to induce complacency. In areas characterized by less social-mindedness, it may be as well that the evidence cannot be presented.

From even this brief examination of the situation related to the rural school environment certain major problems of concern to public health departments, to school health works, to educators, and, in fact, to all citizens emerge. How can rural communities be awakened to the need of providing proper facilities and maintenance to assure a hygienic school environment? How can the co-operation of teachers be enlisted to use facilities with maximum efficiency? How can minimum hygienic standards be maintained for rural schools in districts of low assessed valuation?

Health Services for Rural Children

The inquiry revealed a more encouraging picture regarding the health services supplied in the counties reporting. In regard to periodic health examinations, 13 counties reported such service in more than 75 per cent of schools, 1 county in from 50 to 75 per cent, 1 county in from 25 to 50 per cent, and 5 counties in less than 25 per cent of the schools. Periodic dental examinations were reported by 8 counties in more than 75 per cent of the schools, by 12 counties in less than 25 per cent of the schools. Daily health inspection was reported by 11 counties in more than 75 per cent of the schools, by 4 counties in from 50 to 75 per cent, 1 county in from 25 to 50 per cent, and 4 counties in less than 25 per cent of the schools. Vaccination and immunization were reported by 18 counties in more than 75 per cent of the schools and by 2 counties in from 50 to 75 per cent. Preschool clinics were reported by 7 counties in more than 75 per cent of the schools, by 2 counties in 50 to 75 per cent, by 3 counties in from 25 to 50 per cent, by 8 counties in less than 25 per cent of the schools. Child guidance clinics were reported by 2 counties in more than 75 per cent of the schools, 1 county in 25 to 50 per cent and 17 counties in less than 25 per cent of the schools. In response to the question about availability of services for the correction of defects for children from families financially unable to provide treatment, 6 counties reported such service available in more than 75 per cent of schools, 1 county in 50 to 75 per cent, 7 counties in 25 to 50 per cent, and 6 counties in less than 25 per cent of the schools.

As an indication of outstanding problems relative to health service, the following sampling of comments is quoted:

Need dental program

Need services for teeth, eyes, ears

Lack of funds for corrections

Health service most inadequate

Need dental care and eye glasses

Need examination by physician

Our greatest problem is correction of defects

Distances from schools to clinic centers too great

Lack of medical public health service in certain areas due to opposition of local doctors

Inadequate number of persons on staff for services to be rendered

Nurse's case load too great

Dental care not available

Need child guidance service

Teachers and parents are not fully aware of teachers' authority to exclude on suspicion of communicable disease, including colds and skin infections

It is apparent that great differences exist among counties in the quantity and quality of health service. There is evidence of a tendency to throw the entire responsibility for health service on the doctors, dentists, and nurses. In situations where such services are not supplied there is a tendency to neglect these factors altogether.

Some questions emerge which require the immediate consideration of all agencies concerned. How can teachers secure more knowledge about physical growth and health to perform those health services which legitimately are within their ability and authority? How can greater co-operation be secured between the health service personnel and the teachers in planning for the physical welfare of the group and in making adjustments to the needs of individual children? How can regular and adequate medical examinations be made available to all rural children?

The school is the one agency which serves all the children of the community. It must also be the agency which guarantees necessary medical and dental supervision to the children of the community. Through education and reasonable care, the rural school should make an enormous contribution to the present and future welfare of rural America.

Health Education in Rural Schools

Recent literature has emphasized the educative values of the health services. Not only is the medical examination important because of the information secured, but it offers an excellent opportunity to help the individual to become intelligent, resourceful, and self-reliant in meeting his health problems. The question was asked: In how many rural schools are the health experiences truly educational?

With regard to the health examination 13 counties reported it truly educational in more than 75 per cent of the schools, 3 counties in from 50 to 75 per cent, 1 county in from 25 to 50 per cent, and 3 counties in less than 25 per cent of the schools. The nutrition program was judged truly educational by 9 counties in more than 75 per cent of the schools, by 4 counties in 50 to 75 per cent, by 5 counties in 25 to 50 per cent, and by 2 counties in less than 25 per cent. The program of physical education and recreation was considered truly educational by 13 counties in more than 75 per cent of the schools, by 2 counties in 50 to 75 per cent, by 5 counties in 25 to 50 per cent, and by 1 county in less than 25 per cent of the schools. The program of rest was considered truly educational by 3 counties in more than 75 per cent of the schools, by 5 counties in 50 to 75 per cent, by 2 counties from 25 to 50 per cent, by 10 counties in less than 25 per cent of the schools. Clinics of

various types were considered truly educational by 8 counties in more than 75 per cent of the schools, by 1 county each in from 50 to 75 and from 25 to 50 per cent of the schools, and by 10 counties in less than 25 per cent of the schools. Such data should immediately challenge all concerned with the need of examining how these services are rendered in order to improve them as educational experiences for children.

The question was asked: In how many schools is proper health instruction given in (1) nutrition and diet, (2) exercise and rest, (3) personal hygiene, (4) sex hygiene, (5) posture, (6) prevention of disease, (7) control of communicable disease, (8) ability to select reliable medical service? Without analyzing in a detailed manner, the counties report proper health instruction in most of the schools with two notable exceptions. Fifteen of the reporting counties showed sex hygiene properly taught in less than 25 per cent of the schools, 11 counties reported that in less than 25 per cent of the schools were children given ability to select reliable medical service. These two areas open a series of important problems with which the school health program must courageously come to grips.

Although the general report on other items was reasonably favorable, the number of counties reporting less than adequate competency on other items leads inevitably to considerations of what must be done in the pre-service and in-service preparation of teachers to make them competent to deal with the health education content.

Health instruction consists of the formation of acceptable health habits, the acquisition of accurate health knowledge, and the development to attitudes conducive to healthful modes of living. It involves proper emphasis on health in all areas of experience in the curriculum. It includes the practice of health habits of cleanliness, nutrition, exercise, rest, posture in the day-by-day living in the school. It includes physical education activities graded to the maturity level of the children. It involves a balanced program of wholesome living including study, exercise, and rest. The reports from the counties indicate that schools are only beginning to assume their responsibilities for a total health education program.

The final question addressed to the health personnel related to certain aspects of mental health. Modern experts in the field have presented a consistent point of view concerning the relationship between physical and mental health. Ten counties expressed the belief that there was recognition of children's need for emotional security in more than 75 per cent of the schools, 3 counties in 50 to 75 per cent, 1 county in from 25 to 50 per cent, while 6 counties believed that there was such recognition in less than 25 per cent of the schools. Thirteen counties indicated that opportunity for self-expression was provided in more than 75 per cent, 4 counties in from 50 to 75 per cent, 2 counties in from 25 to 50 per cent, and 1 county in less than 25 per cent of the schools. Fourteen counties reported that the program is

adjusted to ability so children can succeed with reasonable effort in 75 per cent of the schools, 3 counties in 50 to 75 per cent, and 3 counties in less than 25 per cent of the schools. Twelve counties expressed the belief that there was no undue emphasis on speed tests, grades, promotions, and other artificial motivations in more than 75 per cent of the schools, 2 counties in 50 to 75 per cent, 2 counties in 25 to 50 per cent, and 3 counties in less than 25 per cent of the schools.

A number of persons reporting called attention to the need of provision of properly prepared persons for work in the field of mental health on the staff. Few counties have the services of psychologists and psychiatrists. In the interests of economy, in order to have more money for bigger and better prisons, this state service was recently discontinued.

The attitudes of parents and rural school trustees as obstacles to proper development of health services were frequently mentioned, pointing to a need for more specific programs of parent education and greater emphasis on health problems in trustees institutes.

The major outcome of this preliminary study is an increased realization that every county should undertake a thoroughly objective study of how well it is providing a functional health program in its rural schools. Improvement in many cases is dependent upon willingness to expend public funds in the interests of child welfare, but, in many cases, too, improvement waits only upon knowledge, insight, attitude, and conscious purpose. There is no more patriotic duty to which citizens can address their energies than that of raising the level of life in our country districts.

RADIO IN THE MUSIC EDUCATION PROGRAM OF RURAL SCHOOLS

Gertrude A. Hoekenga, *Music Supervisor, Stanislaus County*

Of late years, progressive music educators have become more aware of the opportunities which radio offers in the field of music education, both as a teaching aid and as a stimulant to greater interest and participation in music by the pupils. They have known that radio might contribute greatly to the music program of the public schools, but they have recognized also that generally teachers have not given sufficient attention to this new medium of radio, nor acquainted themselves adequately with its use and possibilities as an educational tool.

In an effort to determine the extent to which radio was being used in rural classrooms, two studies, based on questionnaires, were conducted in the spring of 1940. One of these covered the entire state of California, and the other surveyed the practices in a representative county within the state. It should be borne in mind that the results indicated rural practices and not those in urban communities or cities, for in the case of the latter a good deal more activity would probably have been indicated.

A third study was made of the listening habits and attitudes toward radio of rural school children in their homes, as well as of their likes and dislikes according to grade and age levels. This questionnaire was circulated among 1,321 rural school children of Stanislaus County, ranging from the fifth through the eighth grade, and with an age distribution of from nine to seventeen years of age.

Use of Radio in Music Education in Supervised Rural Schools

Replies to questionnaires were received from 46 counties out of a total of 58. Of these, 1 county, San Francisco, has no rural schools; 1 other reported that a survey of the music situation was being contemplated, but no information was available at the time. The remaining 44 counties represented 1,957 rural schools. Some of the counties gave such vague information on the number of schools having radios that their replies to this question were discounted in arriving at an average figure. Of the 1,602 rural schools giving definite replies as to the possession of, or access to, a radio, 606, or 38 per cent, answered in the affirmative. A summary of the replies to the questionnaire is reported in Table 1. Five counties reported difficulty in reception due to geographical location, such as mountains or desert, or to lack of electricity in the schools. This condition undoubtedly affects many districts as well which did not specifically indicate such difficulty. It

was noted that, in general, those counties having music supervisors showed more radio activity than those without such supervision. In others showing decided activity, there was a department of radio education or of research and reference.

TABLE 1

SUMMARY OF REPLIES TO A QUESTIONNAIRE ON USE OF RADIO IN MUSIC EDUCATION IN SUPERVISED RURAL SCHOOLS OF CALIFORNIA

	Number of Counties
Number of counties replying	44
Number of schools under supervision	1957
Number of radios in how many rural schools (Definite information from 1602 schools)	606
Is there a county supervisor of music?	
Yes	19
No	25
Does the county recommend in-school programs?	
Yes	24
No	18
Does the county recommend out-of-school programs?	
Yes	17
No	25
Does the county officer sponsor a music broadcast?	
Yes	1
Irregularly	1
Advises	1
No	41
Any other type of radio activity?	
Send names of teachers to Standard School Broadcast	2
Provide schools with Standard School Broadcast Manual	3
Listen to various educational broadcasts	7
Present occasional broadcasts	7
Radio survey	1
Opening exercises	1
Aid in listening preparation	1
Provide schools with CBS and NBC schedules	1
Does the county own a recording machine?	
No	43
Districts do	1
Any other local broadcast widely used?	
No	34
Yes	8
No reply	2
Changes or developments contemplated in the future?	
None	26
Increase amount of radio equipment in rural schools	6
Plan survey	1
Studying radio situation	1
Broaden present county broadcast program to include use of vocalist, more appreciation	1
Write suggestions to program broadcasters	2
Plan to broadcast through local station	3
Contemplate purchase of recording equipment	2
Issue bulletins with radio announcements	1
Encourage use of radio	1
Relate broadcast to curriculum units	1
Make use of recorded programs	1
Undertake co-operative planning of programs	1

Fifteen counties reported no recommendation given as to either desirable in-school or out-of-school listening programs, while in the remainder, recommendations were made for one or both types of programs, either by means of bulletins or teachers' meetings.

Only 1 county, Humboldt, reported broadcasting of music programs under sponsorship of the county office, as being carried on regularly. Since the completion of the survey, 2 other counties have been broadcasting while several others are contemplating such a step. Los Angeles County reported that musical groups were given a chance to perform over the weekly fifteen-minute broadcast presented locally, but noted that such broadcasting was not regularly scheduled. In Merced County, the Office of the County Superintendent of Schools advised in the preparation of a weekly half-hour broadcast over the local station.

Several counties were active in providing their rural teachers with manuals for the Standard School Broadcast, and in presenting student organizations from time to time over local stations; but on the whole, not much activity was noted by the county unit.

The results of the questionnaire indicated that the chief music broadcast listened to was the Standard School Broadcast. This information was volunteered even where it was not asked for specifically. Only four counties reported use of any local music broadcast aside from this program.

At the time of the study, no county system owned a recording machine, although several were contemplating the purchase of such a machine. Since that time, at least two counties own recording apparatus.

The report shows the following changes or developments were contemplated: (1) providing rural schools with radios; (2) surveys of school music broadcasting; (3) plans for a county broadcasting program; (4) use of recorded music broadcasts; (5) purchase of recording equipment; (6) issuance of radio bulletins; (7) suggestions for the improvement of broadcasts being used; (8) more co-operative planning of radio use through teacher groups; (9) better correlation of available broadcasts with curriculum units by means of advance information, work sheets, and the like.

A study of replies to the questionnaire indicated that the main problem throughout the entire state was lack of equipment for receiving broadcasts. It was also evident from the replies that in many counties, radio education has not been seriously considered as yet, and that it has not been specifically encouraged.

Use of Radio in the Supervised Schools of Stanislaus County

In an effort to determine the extent of radio activity in a representative county and the difficulties encountered by administrators, a questionnaire was sent to each principal of the 40 schools under county supervision in Stanislaus County. This particular county had had music supervision during the year in question, and more extensive use of radio had been urged by the County Superintendent of Schools. Lists of in-school as well as out-of-school programs were recommended to the teachers by means of the Superintendent's bulletin, as well as through the music bulletins. A summary of the

results of this questionnaire to administrators and of a questionnaire to rural pupils in Stanislaus County on home listening habits and attitudes toward radio are shown in Table 2 and Table 3. At the time of the questionnaire, 19 out of 40 rural schools were using the radio at some time during the week, as contrasted with 9 during the previous year. This increase indicated a 48 per cent use during the last year, as contrasted with a 23 per cent use the preceding year, or a gain of 25 per cent. There was a distinct gain in the amount of listening done, with only 3 schools reporting less activity than during the previous year. It is interesting to note, that, during 1940-41 the use of radio has increased to 29 schools out of the present 38 rural schools, indicating a 76 per cent use or an additional gain of another 28 per cent. This is undoubtedly due to increased interest in this medium, to the support given to the work from the Office of the County Superintendent of Schools, to aids and materials supplied to teachers, to a radio institute session, and to the feeling of both teachers and boards of education that radio is making a definite contribution to the program of rural education, particularly in the field of music.

Radios used in these rural schools were of varying types, as indicated in the answers to the questionnaire. It was interesting to note that for the most part, the radios were owned by teachers or were earned by pupils of the school. This condition forces the conclusion that, at the time of the study, the school boards were not convinced of the usefulness of radio. Perhaps this attitude was due to the fact that schools have restricted their use of radio to one or two programs a week, or to scattered listening activities, practices which did not seem to justify the expenditure of school funds. During 1939-40 a considerable number of radios were supplied by the school boards. It is believed that this change has been due to wise use of radio, to added emphasis placed on the value of school and home listening, to increased interest on the part of teachers and school administrators, and to educating the school board in the opportunities offered by radio to the enrichment of the curriculum.

Most of the listening was done in classrooms, where it seemed to have the most satisfactory results. This fact supports the opinion of many experts in educational broadcasting, who feel that familiar surroundings, and easy access to such aids as maps, boards, and paper, are contributing factors to the learning from radio broadcasts. Program listening was determined in various ways, as indicated in the answers to the questionnaire.

The Standard School Broadcast was the most popular for school listening, and constituted almost the entire listening experience for some schools. Art correlation was the most used method of correlation. During 1939-40 an increasing amount of correlation with the language arts, and with the study of literature was noted. There appeared to be little creative music stimulus. Preparation varied greatly, but the discussion of the subject matter to be broadcast and vocabulary study were the principal means of preparation. Several schools had pupils prepare work sheets for the music broad-

TABLE 2

SUMMARY OF REPLIES TO QUESTIONNAIRE TO RURAL SCHOOL ADMINISTRATORS IN STANISLAUS COUNTY ON USE OF RADIO IN MUSIC EDUCATION

	Number of Schools
Number of schools questioned	40
Radio used in 1938-1939	9
Used radio in 1939-1940	19
Type of radio being used in schools	
Stationary in classroom	5
Portable in classroom	12
Stationary, with amplifiers in each room	2
Where do classes listen?	
Upper grade classroom	12
Auditorium	1
Classroom or auditorium	1
Individual classrooms	5
How was radio obtained?	
Owned by teachers	7
Earned by pupils	5
Purchased by board	1
Bought by teachers	1
Given by P.T.A.	1
Donated	1
Bought by school club	1
Programs listened to regularly	
Standard School Broadcast	19
American School of the Air	3
Alameda School of the Air	2
Other types of programs listened to occasionally?	
National events	7
News	7
Lectures	5
Musical offerings	3
None	8
Who decides upon programs to be listened to?	
Students and teachers	7
Teachers	6
Principal	5
Principal and faculty	1
Could transcriptions be used?	
Yes	24
Sometimes	4
No	3
No answer	9
Difficulties encountered in using broadcasts as an educational device	
Too difficult	6
Time scheduling difficult	6
Had to correlate	4
Poor reception	3
Faulty equipment	2
No electricity	2
None	2
Radio used more or less this year than last year?	
More	14
Less	3
Same	3
Type of preparation given	
Discussion	10
Prepare intermission song	10
Vocabulary study	5
Research	5
Explanation of lesson	4
Work sheets made	2
Music of study selection played	2
Activity during broadcast?	
None	11
Take notes	4
Use work sheets	3
Do art work	1
Follow copy of program	1
Follow-up activities	
Discussion	13
Art correlation	12
Notebooks	6
Talks and reports	4
Answer typed questions	4
Composition work	3
Play records of study selection	2
Research	2
Does music lend itself well to broadcasts?	
Yes	29
No	1
Not sure	10
Recommendations made regarding good programs?	
Yes	29
Occasionally	4
No	1
No answer	5
Rarely	1

casts; and it was apparent from personal observation, as well as from the children's own statements, that children receiving broadcasts with this type of preparation benefited to a much larger extent than those where no work sheets were used and that better listening habits were evidenced as well as greater subsequent interest in both the broadcast and in listening to similar type broadcasts in out-of-school time.

TABLE 3

SUMMARY OF REPLIES TO A QUESTIONNAIRE ON HOME LISTENING HABITS AND ATTITUDES TOWARD RADIO SENT TO PUPILS IN GRADES 5 TO 8 OF THE RURAL SCHOOLS OF STANISLAUS COUNTY

	Number of Pupils		Number of Pupils
Total number of pupils questioned	1321	Number of radios in home	
Girls	644	None	107
Boys	677	One	956
Where pupil did most listening		Two or more	251
Living room	800	Does pupil ever listen to symphonic music	
Dining room	202	Never	246
Kitchen	139	Sometimes	756
Child's own bedroom	73	Often	152
Type of musical medium preferred			
Instrumental	550		
Vocal	580		

FAVORITE TYPE OF RADIO MUSIC

First choice		Second choice	
Cowboy	487	Song programs	335
Dance orchestra	309	Cowboy	215
Piano	87	Piano	182
Song programs	69	Dance orchestra	155
Symphonic	63	Symphonic	104
Operatic	39	Operatic	47

FAVORITE PROGRAM

Musical		Any type	
No choice	490	I Love a Mystery	396
Kay Kyser	145	Lone Ranger	143
Major Bowes	108	Henry Aldrich	99
Chesterfield Time	50	Fibber McGee and Molly	43
Standard Symphony	61	Jack Benny	38
Kraft Music Hall	37	Jack Armstrong	38
Bill Bates (Local)	36	Gang Busters	31
Maddux Brothers	35	Kay Kyser	29
Hit Parade	28	Lux Radio Theatre	24
National Barn Dance	27	Little Orphan Annie	23

A large percentage of the schools reporting indicate a belief that radio is an excellent medium for musical expression, as well as that transcriptions of broadcasts would be useful and would result in a greater use of outside aids to supplement classroom teaching. All schools at some time or other made recommendations to children regarding available radio programs of an educational nature for out-of-school listening.

Most of the difficulties in using radio mentioned by principals of rural schools can be listed under four headings: (1) lack of correlation with regular school work; (2) difficulty in scheduling for the broadcast, either because of the crowded curriculum or because of the hour of the broadcast; (3) poor reception, due to faulty equipment or to the presence of high tension wires near the school; (4) difficulty of the music broadcast for schools with little listening experience, and the need to simplify it for younger children. As a result of personal contact with teachers using the broadcast, it was found that they felt the need for more informational material regarding the particular broadcast to be used, and that some means of repetition would greatly aid the efficiency of such broadcasts. During the present year an effort is being made to fill these indicated needs, through the issuance of a radio log containing much informational material, preparation of a pupil workbook for the Standard School Broadcast, making records of musical selections available for the needed repetition through the county library, and the purchase of a recording machine so that entire broadcasts may be recorded and replayed to children, if requested.

General conclusions reached were (1) that interest in radio as a medium of instruction is increasing, as a result of administrative and supervisory interest; (2) that the general use of the radio is very limited as yet in schools having receiving equipment; (3) that, in many cases the effectiveness of the broadcast was greatly decreased because of insufficient preparation on the part of both class and teacher, as well as because of curtailment of follow-up activities and discussion; (4) that the chief use of broadcasts has been to supplement, rather than to form a basic study material; (5) that there is need for radio music broadcasts which tie in more closely with classroom work following a prescribed course, which are scheduled to fit the rural program, and which are planned for the capabilities and interests of rural children, and take into consideration their background; (6) that the trend is toward co-operative work in the choice of programs; (7) that teachers feel the need of aids such as slides, records, informational material, and references in order to correlate the broadcasts better.

Conclusions

In the study of the offerings of radio to the field of rural music education, and its use in the classroom, certain general conclusions were drawn.

It was found that there has been an improvement in the variety of the material of the type of lesson broadcast, with a great deal more activity indi-

cated, such as singing, musical notation, sight reading, playing, and other directed activities.

Radio continues to be used more to supplement classroom instruction than to instruct by means of a model lesson to be followed up by the classroom teacher.

It was plainly indicated that the effectiveness of radio instruction depends upon quality of the broadcast, and to a still greater extent, upon the skill and initiative of the classroom teacher in preparing, receiving, and following up the broadcast with her class.

That listening aids for the pupil increase the effectiveness of the efforts of the radio teacher could not be denied. There is still a diversity of opinion as to the relative merits of activity or no activity during the broadcasting of appreciation-type lessons.

Finally, the conclusion was reached that the narrower the area of instruction for which the broadcast is intended, the more closely it tends to correlate with the work of the basic course, while the broader the area which it is intended to cover, the more the broadcast becomes merely supplementary in nature.

THE SCHOOL AND COMMUNITY RECREATION

Richard L. Davis, *Principal, Washington School, Selma;* and Charles Edgecomb, *District Superintendent of Schools, Selma*

The public schools are making increasing progress in incorporating recreational activities in the school program. Somewhat symbolic of the American democratic ideal the schools are showing the way to the people in the fast-growing movement in the interests of community recreation throughout the state and nation. Employing to its fullest extent one of the cardinal principles of education, the worthy use of leisure time, educators and school boards are showing spirited and active interest in the endeavor to bring a well-balanced and effective program of recreation to all the people. Recognizing the fact that students of the movement advocate joint sponsorship with civic and school authorities as the vehicles of co-operation, and using the "Community Recreation Act of 1939" as their legal stepping stone, the school officials are building worth-while programs over the state. The local communities, under this leadership, are coming more and more to the realization that "the change from the agricultural workday to the industrial workday" is presenting problems which it is their duty to solve. Toward this end the civic authorities have turned to the schools for the use of playgrounds, play centers, clubrooms, wading and swimming pools, and other recreational facilities. They have come to the schools for the trained leadership in recreational organization and supervision necessary to lead their programs, and the schools of California have not been found wanting.

The system of community recreation sponsored co-operatively in Selma by the elementary school board, the high school board, and the city council is representative of this philosophy in educational practice, and may perhaps serve as a model for other communities. The school officials have been far-sighted in lending the financial and moral support of the schools to a program of activities which has come in the past year to serve the entire community. By furnishing to these activities not only the facilities necessary, but also trained leadership in an organizing and supervisory capacity, the co-operation of the schools has become the motivating factor in the creation of the program. To those school officials and communities interested in sponsoring activities of this type the following outline of procedure may be helpful.

1. Make a complete survey of facilities, both potential and actual for recreational activities in the community.
2. Promote active interest and co-operation in and with the program among local citizens holding positions of civic authority.
3. Promote the passage of an ordinance which sets up a recreation commission upon which is represented the local government, the elementary and secondary school

administrations, the Parent-Teacher Association, and other local organizations whose interest and co-operation are needed.

4. Convince the local school administrations of the benefits of and need for the program, and secure from them a pledge of support.
5. Secure the appointment of a trained superintendent or supervisor either on a part-time or a full-time basis whose duty it will be to organize the program and co-ordinate all co-operating agencies in bringing into full use all available facilities. (Such a person may well be found in the school personnel of the community.)
6. Enlist the aid and co-operation of the Recreation Section of the Works Project Administration in the search for recreation talent on school playgrounds, swimming pools, wading pools, preschool centers, clubrooms, and other recreational outlets.

The creation of this type of program involves the expenditure of funds. In most small communities it will be found that the schools will be in a position to provide many facilities not otherwise available, therefore it would seem that the greater portion of the expense necessary to operate these facilities for other than strictly school uses should be provided by the city authorities. On the other hand, it will be found that some school districts are in a position and legally authorized to bear a portion of the expense. However, it is good practice for the above mentioned representative commission to arrange for budgetary provision necessary to the maintenance of the program.

Most school authorities are well acquainted with the more or less recent organization of preschool centers in the larger cities. This type of activity, especially in those communities where kindergarten facilities are not provided, may well be an important branch of the recreational program regardless of the size of the community. Where foreign and migrant elements form a considerable portion of the population the organization of preschool centers under trained leadership is one of the most worth-while activities possible.

The recreation commission and sponsors of the program in this community have agreed that the year-round provision of recreational opportunity for all of the people has been of great value. During the summer of 1939, when lighted playground areas were furnished for all those who wished to use them, a distinct reduction was noted in the number of juvenile delinquents. Research findings indicate that the provision of an adequate recreational program aids in the solution of our juvenile delinquency problem.

Those who wish to enlist the support of the Federal Authorities in their efforts to provide assistance for these activities will find that the administration of their local area office is ready and willing to co-operate. The Federal Authorities will furnish experienced supervision in the various phases of the program, and are most willing to lend their support under a joint sponsorship.

Because it is the function of the schools to serve the community and since provision for the worthy use of leisure time is becoming an increasingly serious problem, undoubtedly there will be more evidences of school authorities lending their support to recreational activities.

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